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BIBLIOGRAPHY

OF

THE MORE IMPORTANT CONTRIBUTIONS

TO

AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,

BY

SAMUEL HENSHAW.

Parts I, II, and III.

THE MORE IMPORTANT WRITINGS

OF

BENJAMIN DANN WALSH

AND

CHARLES VALENTINE RILEY.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

1890.

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1889.

FORTY-SEVENTH CONGRESS, FIRST SESSION.

CONGRESS OF THE UNITED STATES,
IN THE HOUSE OF REPRESENTATIVES,
June 24, 1882.

Resolved, By the House of Representatives (the Senate concurring) that there be printed, for the use of the Department of Agriculture, one thousand copies of a special report, entitled "Bibliography of Economic Entomology."

Attest:

EWD. MCPHERSON,
Clerk.

Passed the Senate July 6, 1882.

F. E. SHOBER,
Acting Secretary.

A true copy.

EWD. MCPHERSON,
Clerk.

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF ENTOMOLOGY,
Washington, D. C., June 12, 1889.

SIR: In the absence of Professor Riley, who is now at the Paris Exposition in official capacity, I beg to submit for publication Parts I, II, and III of the Bibliography of American Economic Entomology, which was ordered by Congress in July, 1882. Owing to various unforeseen delays this work has not yet been completed. Its preparation was originally assigned by Professor Riley to Mr. B. Pickman Mann, formerly of this Division, and upon the severance of his connection with the Department, in the fall of 1885, it was turned over in an incomplete and fragmentary condition to Mr. Samuel Henshaw, of Boston, who has added greatly to it and practically rewritten the portions already prepared.

The extent of the work renders it advisable to publish it in several parts, and as there is unquestionably a more urgent need on the part of working economic entomologists for a bibliography of the writings of B. D. Walsh and C. V. Riley than of others, on account of their great number and value, these portions have been finished first. Their immediate publication will probably antecede the publication of the final part only by a few months.

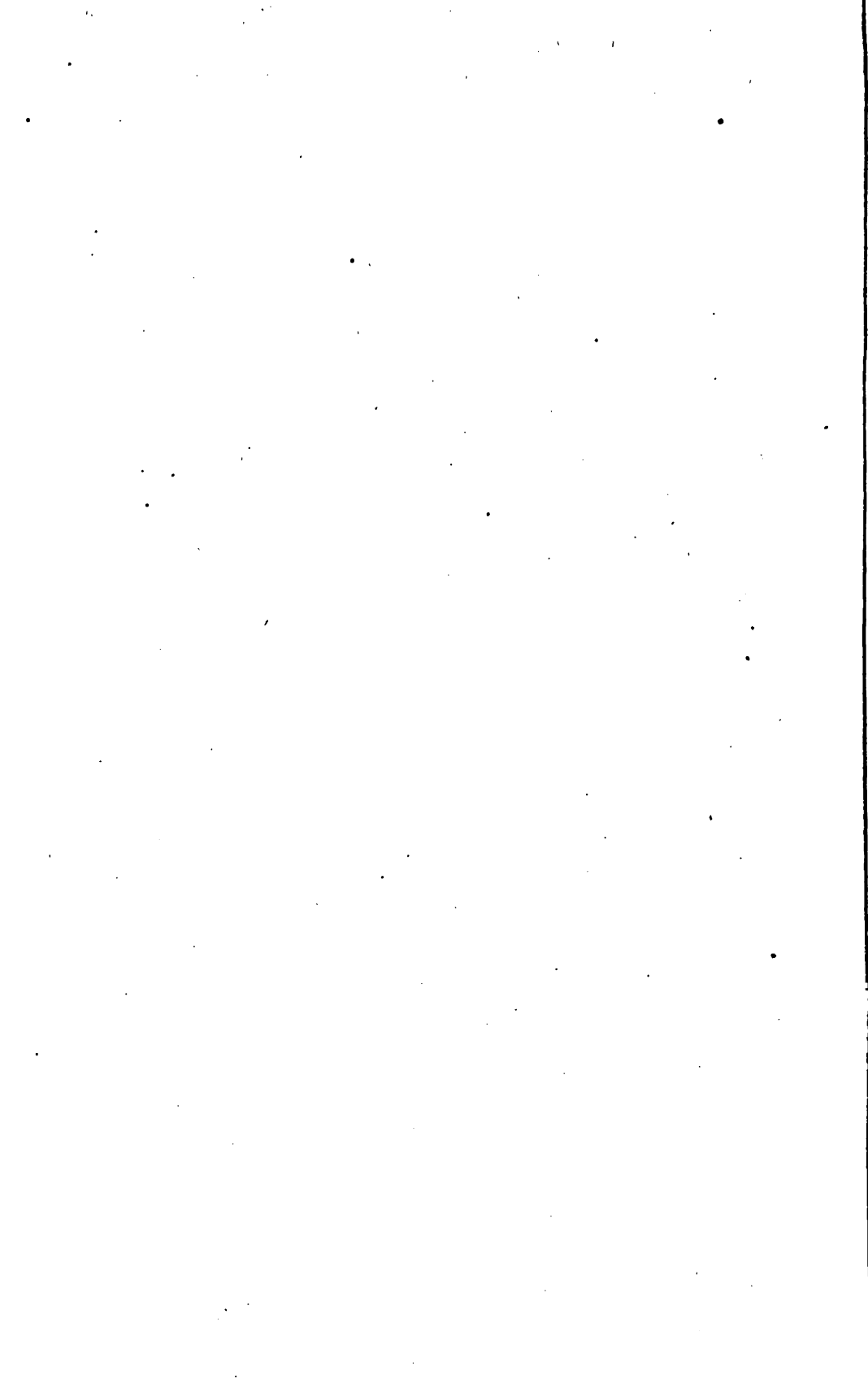
Very respectfully, yours,

L. O. HOWARD,
Acting Entomologist.

Hon. J. M. RUSK,
Secretary of Agriculture.

TABLE OF CONTENTS TO PARTS I, II, AND III.

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INTRODUCTION TO PARTS I, II, AND III.

The object of the present lists is to record the principal entomological writings of B. D. Walsh and C. V. Riley. Few will be likely to criticize the association of the names of Walsh and Riley in a list of this kind, so largely devoted to economic entomology, or to question the desirability of collating their writings in advance of others.

As recognized authorities upon entomology, especially from an economic standpoint, their writings have been extensively quoted sometimes with, but frequently without, credit in the agricultural and horticultural journals of the day. These secondary references, though of a certain value when the original is inaccessible, have, as a rule, been omitted. In citing such as are given I have used my personal judgment. To have given all would have increased the size of the list considerably with but a slight increase in its usefulness.

Occasionally, a publisher to meet some popular demand puts the writings of an author into book form without the knowledge of the latter. Such an occurrence has happened more than once with Dr. Riley's writings. To mention but one: In 1877 Messrs. George Rutledge & Sons, of London, published "The Colorado beetle, with suggestions for its repression and methods of destruction," with Dr. Riley's name upon the title-page as author. This is a partial reprint of Potato Pests entirely unsanctioned and published without knowledge of the author. (See *London Times*, October 17, 1887.) These publishers' reprints are omitted from this list. The "S.-b." after the reference of many of the articles from the agricultural and other journals refers to the series of scrap-books used in divisional work.

A biographical sketch of Dr. Walsh is given in the second volume of the *American Entomologist*, Vol. II, No. 3, pp. 65-68, January, 1870.

The chief facts in Dr. Riley's life may be found in the "Commonwealth of Missouri" (1875) and the *National Farmer*, September 20, 1883.

In the preparation of the list I have freely used all data accumulated by the Division, notably the work of Mr. B. P. Mann and a private list of Dr. Riley's.

Many persons, both within and without the Department, have kindly answered my inquiries.—S. H.

BIBLIOGRAPHY OF THE MORE IMPORTANT CONTRIBUTIONS TO AMERICAN ECONOMIC ENTOMOLOGY.

THE WRITINGS OF B. D. WALSH (1860-1873).

1. WALSH, B. D. Bark-lice. <Western Rural. S.-b. No. 3, p. 11.
Habits of *Lecanium* compared with *Aspidiotus* [= *Mytilaspis*].
2. WALSH, B. D. Entomological notes. <Prairie Farmer, 17 May, 1860, [v. 21], n. s., v. 5, pp. 308-309, figs. S.-b. No. 1, pp. 42-43.
Notice of *Coccus harristi* n. sp. [= *Chionaspis furfurus*]; figure of its scales; description and figure of *Capsus oblineatus* [= *Lygus pratensis*] infesting apple, quince, and pear trees; figure of larva case and imago and description of *Phycita nebulo* [= *Acrobasis indiginella*]; figures of imago and of injuries of *Amphicerus bicaudatus*; habits of the same and of *Scolytus* [= *Xyleborus*] *pyri*, *Saperda bivittata* [= *candida*] and *Chrysobothris femorata*; means against the last.
3. WALSH, B. D. "Cutworms." <Prairie Farmer, 9 August, 1860, [v. 22], n. s., v. 6, pp. 82-83, fig. S.-b. No. 1, pp. 84-85.
Account of the larvæ of *Lachnosterna quercina* [= *fusca*] of *Elateridæ* of *Agrotidæ* and of *Pangus* [= *Harpalus*] *caliginosus*; figures of larvæ and imagos of the same or allied species; also of *Heteronychus* [= *Ligyrrus*] *relictus*, *Lopha* [= *Bembidium*] *4-maculatum* and *Agonoderus pallipes*.
4. WALSH, B. D. [*Ips quadrisignatus*, Say.] <Prairie Farmer, 1860, [v. 22], n. s., v. 6, p. —.
Ips 4-signatus [= *fasciatus*] attacks growing ears of sweet corn.
5. WALSH, B. D.] "Insect Life." <Proc. Agric. Conv.; Ann. meeting Ill. Nat. Hist. Soc.; Comm. Exerc. State Normal Univ. [Bloomington, Ill.], 1860, pp. 11-12.
Report, compiled from Chicago papers of address delivered before the Illinois Natural History Society; comparison between injurious insects and an invading army; necessity of appropriations for carrying on entomological work; economic entomology in Europe; importance of beneficial insects.

6. WALSH, B. D. Insects injurious to vegetation in Illinois. <Trans. Ill. State Agric. Soc., September, 1861, v. 4, pp. 335-378, figs. 1-11. Separate: 1861, 43 pp., 1 pl. Reprint in part: <Trans. Ill. Nat. Hist. Soc., v. 1. *Prairie Farmer*, 6 December, 1861, [v. —], n. s., v. —, pp. 370-371.

Ravages of injurious insects; enemies of the same; notes on *Cecidomyia destructor*, *Saperda bivittata* [= *candida*], *Chrysobothris femorata*, *Conotrachelus nenuphar* and *Blissus leucopterus*; natural history, ravages and means against *Leucania unipuncta*; figures its larva, pupa and imago; descriptions and figures primary and secondary parasites of the army-worm; figures *Hippodamia* (= *Megilla*) *maculata*, *Coccinella munda* [= *sanguinea*] and a larval coccinellid.

7. WALSH, B. D. From Benj. D. Walsh. < *Illinois Farmer*, October, 1861.

Denies statement attributed by C. Thomas (*Illinois Farmer*, September, 1861), that he (Walsh) believed in the hibernation of the pupa of *Leucania unipuncta*.

8. WALSH, B. D. The army-worm question. < *Prairie Farmer*, 5 December, 1861, [v. 24], n. s., v. 8, pp. 370-371. S.-b., No. 4, p. 22.

Replies to arguments of C. Thomas (*Prairie Farmer*, 1861, v. 8, pp. 306-307), on the hibernation of *Leucania unipuncta*.

9. WALSH, B. D. The army-worm question. Mr. Walsh's reply. < *Field Notes*, 14 December, 1861.

Controversial answer to the assertion of J. H. Klippart (*Field Notes*, 30 November, 1861), that the larvæ of *Leucania unipuncta* are viviparous.

10. WALSH, B. D. The army-worm and its enemies. < *Prairie Farmer*, 1861, [v. 24], n. s., v. 8, p. 4. Reprint: <Trans. Ill. Nat. Hist. Soc., v. 1. *Prairie Farmer*, 6 December, 1861, [v. 24], n. s., v. 8, pp. 370-371.

Popular account of some of the parasites of *Leucania unipuncta*.

11. WALSH, B. D. The army-worm. < *Prairie Farmer*, 1861, [v. 24], n. s., v. 8, pp. 257-258. Reprint: <Trans. Ill. State Agric. Soc., 1861, v. 4, pp. 373-375.

Hibernation of the egg; spring burning as a means against *Lucania unipuncta*; description of *Hookeria* [= *Haltichella*] *perpulchra* n. sp.; notes on other parasites.

12. WALSH, B. D. The army-worm and its insect foes. < *Prairie Farmer*, 1861, [v. 24], n. s., v. 8, pp. 322-323; 337-339; 354-355.

Habits and description of larva and imago of *Leucania unipuncta*; hibernation of the egg; figures of larva, pupa and imago; also of *Exorista* [= *Nemoræa*] *leucaniæ*, *Pezomachus minimus*, *Microgaster* [= *Apanteles*] *militaris*, *Hookeria* [= *Haltichella*] *perpulchra* and *Glyphe viridascens*.

13. WALSH, B. D. Bug preying on honey-bee. < *Prairie Farmer*, 1861. S.-b., No. 4, p. 7.

Unknown heteropteron, said to prey on *Apis mellifica*.

14. WALSH, B. D. The pea and its insect foe. <Prairie Farmer, 1861. S.-b., No. 4, p. 12.
Unknown leaf-miner and leaf-eater on pea; directions for rearing insects.
15. WALSH, B. D. The grain weevil. <Journ. Ill. State Agric. Soc., January, 1862, fig. Reprint: <Trans. Ill. State Agric. Soc. v. 5, pp. 484-485.
Sitophilus [= *Calandra*] *remotepunctata* infests wheat.
16. WALSH, B. D. [*Ithycerus noveboracensis*.] <St. Louis Valley Farmer, March, 1862, v. 14, pp. 82-85, fig.
Ithycerus noveboracensis attacks twigs of fruit trees in nurseries.
17. WALSH, B. D. [Army-worm.] <St. Louis Valley Farmer, 1862, v. 14, p. 161.
Correction of mistake of E. S. Washington (St. Louis Valley Farmer, 1862, v. 14, p. 161); who mistook parasitic larvæ for young *Leucania unipuncta*; economy of parasites of army-worm.
18. WALSH, B. D. [*Brachytarsus variegatus*.] <Journ. Ill. State Agric. Soc., March, 1862, pp. 8-12, fig.
Brachytarsus variegatus parasitic (?) on a large orange-colored cecidomyid (?) larva in stems of wheat.
19. WALSH, B. D. A new insect in wheat, *Bruchus*. <Journ. Ill. State Agric. Soc., April, 1862. Reprint: <Trans. Ill. State Agric. Soc., v. 5, pp. 485-490.
20. WALSH, B. D. [Two apple-tree borers.] <Journ. Ill. State Agric. Soc., June, 1862, pp. 21-23.
Treats of *Chrysobothris femorata* and *Saperda bivittata* [= *candida*].
21. WALSH, B. D. [Colorado potato beetle.] <St. Louis Valley Farmer, July, 1862, pp. 209-210. Reprint (?): <Prairie Farmer, 6 June, 1863, v. —, p. 356, fig.
Doryphora 10-lineata infests egg plants, potato and tomato vines, etc., in Kansas and Iowa.
22. WALSH, B. D. Fire-blight. Two new foes of the apple and pear. <Prairie Farmer, 6 September, 1862, [v. 26], n. s., v. 10, pp. 147-149, fig. Separate: pp. 4.
Fire-blight defined; probably caused by attacks of *Chloroneura malefica* [= *Empoasca viridescens*] and *O. maligna* [= *E. obtusa*]; characters, habits, and ravages of the same; synoptic separation of several genera of *Typhlocybini*; two (2) new genera and thirteen (13) new species are described. For a list of the same see the *Systematic Index*. The figures show *C. malefica* and *C. maligna* and the venation of allied forms.
(NOTE.—The descriptive portion with figures is reprinted in Proc. Bost. Soc. Nat. Hist., February, 1864, v. 9, pp. 314-318.)
23. WALSH, B. D. Plant lice, the corn-root louse, a new enemy to the corn. <Journ. Ill. State Agric. Soc., September, 1862, pp. 8-13, fig. Reprint: <Trans. Ill. State Agric. Soc., v. 5, pp. 491-497, fig.
Aphis maidis (?) infests the roots of young Indian corn as well as the stems of the roasting ears.

24. WALSH, B. D. List of the Pseudoneuroptera of Illinois contained in the cabinet of the writer, with descriptions of over forty new species, and notes on their structural affinities. <Proc. Acad. Nat. Sci. Phil., September, 1862, pp. 361-402.

One hundred and nine (109) species are enumerated; two (2) new genera and forty (40) new species are described. For a list of the same see the *Systematic Index*.

25. WALSH, B. D. [*Erythroneura tricincta* Fitch.] <St. Louis Valley Farmer, October, 1862, pp. 305-306, fig.

Erythroneura [= *Typhlocyba*] *tricincta* on grape-vines.

26. WALSH, B. D. Grasshoppers and locusts. <Journ. Ill. State Agric. Soc., November, 1862, pp. 1-3. Reprint: <Trans. Ill. State Agric. Soc., v. 5, pp. 497-499.

Injuries of locusts in the Mississippi Valley; differences between locusts and Cicadas.

27. WALSH, B. D. On the genera of *Aphidæ* found in the United States. <Proc. Ent. Soc. Phil., December, 1862, v. 1, pp. 294-311, figs. 1-8.

Synoptic separation of the genera; list of seventy (70) species found in the United States, with food habitat; *Aphis* [= *Nectarophora*] *rudbeckiæ* Fitch, *A. vitis* ? Scop., *A. maidis* ? Fitch, *Lachnus caryæ* Harris, *Thelaxes* [= *Colopha*] *ulmicola* Fitch are described; one (1) new genus and eleven (11) new species are described; see the *Systematic Index* for a list of the same; the figures show venation and other details. Two (2) new ants, *Formica aphidicola* and *F.* [= *Lasius*] *latipes*, are described.

28. WALSH, B. D. [Observations on *Papilio glaucus* and *P. turnus*.] <Proc. Ent. Soc. Phil., February, 1863, v. 1, pp. 349-352.

Reasons for considering *turnus* and *glaucus* identical; the latter a dimorphic ♀ of the former; distribution of the two forms; citation of similar case among *Pieridæ* and of analogous one among *Dytiscidæ*; description of larva from which a black ♀ was raised.

29. WALSH, B. D. [Katydid eggs.] <Prairie Farmer, 28 February, 1863, [v. 27], n. s., v. 11, p. 132, fig.

Oviposition of katydid eggs on apple-twigs.

30. WALSH, B. D. Fire-blight. <Prairie Farmer, 4 April, 1863, [v. 27], n. s., v. 11, p. 212, fig. S.-b., No. 1, p. 10.

Description and figures of eggs of *Chloroneura malefica* [= *Empoasca viridescens*] and the slits in which they are deposited in apple-twigs; cause of fire-blight; suggestion of remedies.

31. WALSH, B. D. Insects injurious to fruit trees. <Prairie Farmer, 2 May, 1863, [v. 27], n. s., v. 11, p. 276, fig. S.-b., No. 1, p. 9.

Fruit and foliage of pear-trees destroyed by *Capeus oblineatus* [= *Lygus pratensis*]; description and figure of imago; habits, food-plants, and remedies.

32. WALSH, B. D. The ten-striped spearman. <Prairie Farmer, 6 June, 1863, [v. 27], n. s., v. 11, p. 356, fig. S.-b., No. 1, p. 7.

History, ravages, and means against *Doryphora 10-lineata*; figure of imago; mentions other injurious *Phytophaga*.

33. WALSH, B. D. The plum-gouger; a new foe of the plum. < *Prairie Farmer*, 13 June, 1863, [v. 27], n. s., v. 11, pp. 372-373, figs. 1-3. S.-b., No. 1, p. 6.

Habits, description, and figures of *Anthonomus* ? *prunivida* n. sp. [= *Coccotorus scutellaris*], injurious to plums; comparison with *Conotrachelus nouphar*; figure of the latter.

34. WALSH, B. D. The plum-gouger. < *Prairie Farmer*, 11 July, 1863, [v. 28], n. s., v. 12, p. 21, 2 figs. S.-b., No. 1, p. 10.

Distribution and ravages of *Anthonomus prunivida* [= *Coccotorus scutellaris*]; list of insects found on plum-trees; description of *Conotrachelus puncticollis* n. sp. [= *C. geminatus*]; usefulness of *Reduvius raptatorius* [= *Sinea diadema*]; figures *A. prunivida* and *B. raptatorius*.

35. WALSH, B. D. A new fruit foe. < *Prairie Farmer*, 18 July, 1863, [v. 28], n. s., v. 12, p. 37, fig. S.-b., No. 1., p. 11.

Description and figure of imago of *Epicærus imbricatus*; injuries to fruit trees and gooseberry-bushes; supposed habits of this and allied species; hibernation of the larva of *Conotrachelus*; description of *C. cratagi* n. sp.

36. WALSH, B. D. Leaf-hopper. < *Prairie Farmer*, 25 July, 1863, [v. 28], n. s., v. 12, p. 53.

Proconia [= *Oncometopia*] *undata* injurious to grape-vines in southern Illinois; its eggs laid in twigs.

37. WALSH, B. D. Locust borers. < *Prairie Farmer*, 15 August, 1863, [v. 28], n. s., v. 12, p. 101. S.-b., No. 1, p. 12.

Description and habits of *Clytus* [= *Cyllene*] *robinia*; *Clytus* of *Carya* does not attack *Robinia*; *Cossus robinia* mentioned; larvæ and imagos of *Nitidulidæ* found under decaying bark.

38. WALSH, B. D. Insect friends and insect foes. The twice-stabbed lady-bird. < *Prairie Farmer*, 1863, [v. 28], n. s., v. 12; 22 August, p. 117, figs. 1, 2; 29 August, p. 133, figs. 3, 4. S.-b., No. 1, pp. 11-12.

Description and figure of imago of *Chilocorus bivulnerus*; figure of larva; destruction of injurious insects by predaceous insects; brief description of and means against *Lytta cinerea* [= *Macrobasis unicolor*], found on potato, English bean, and apple, and *L.* [= *Epicauta*] *vittata*, on potato; figures *Lytta atrata* [= *Epicauta pennsylvanica*], found on aster and potato, and larva-cases of *Solenobia* sp. from under bark of apple-trees; note on allies of *Solenobia*.

39. WALSH, B. D. Observations on certain N. A. Neuroptera, by H. Hagen, M. D., of Königsberg, Prussia; translated from the original French MS., and published by permission of the author, with notes and descriptions of about twenty new N. A. species of Pseudoneuroptera. < *Proc. Ent. Soc. Phil.*, October, 1863, v. 2, pp. 167-272, fig.

Dr. Hagen's comments relate to the species described in No. 24; the author's notes supplement these and describe three (3) new genera and twenty-three (23) new species; for a list of these, see the *Systematic Index*; descriptions of previously described species, with notes on their habits, distribution, etc., are also given; *Batis interlineata* [= *Siphylurus femoratus*] is proposed

39. WALSH, B. D.—Continued.

(p. 190) in case *B. [= S.] femorata* Walsh is distinct from *B. [= S.] femorata* Say; in a note (p. 255) *Ophiogomphus mainensis* n. sp. is described from Packard's manuscript; the venation of the *Odonata* and the terminal abdominal characters of *Sialis infusata* are figured.

40. WALSH, B. D. On certain remarkable or exceptional larvæ, coleopterous, lepidopterous, and dipterous, with descriptions of several new genera and species, and of several species injurious to vegetation, which have been already published in agricultural journals. <Proc. Bost. Soc. Nat. Hist., February, 1864, v. 9, pp. 286–318.

Habits of the larva of *Colalpa lanigera*, *Pelidnota punctata*, *Cratonychus [= Melanotus] incertus*, and *Xyloryctes satyrus*; comparative characters of the larva and imago of *Halisidota antiphola* n. sp. [= *tessellaris*]; description of larva, pupa, and imago of *Sphingicampa* (n. g.) *distigma* n. sp. [= *bicolor*]; characters and affinities of *Dryocampa [= Sphingicampa] bicolor*?; description of imagos of *Limacodes scapha* and *L. ? [= Phobetron] hyalinus* n. sp., and of larva of the last and *L. ? [= Phobetron?] tetradactylus* n. sp.; description of the larva, pupa, and imago of *Hipparchiscus* n. g. *venustus* n. sp. [= *Aplodes nimosaria*]; habits and description of the larva of an undetermined *Tabanus*, description of the pupa; description of the larva, pupa, and imago of *Midas fulvipes* n. sp., habits of its larva. On pp. 309–318 descriptions of several new species, with brief notes of food-habits, etc., are reprinted from various agricultural journals.

41. WALSH, B. D. On dimorphism in the hymenopterous genus *Cynips*; with an appendix containing hints for a new classification of *Cynipidæ* and a list of *Cynipidæ*, including descriptions of several new species, inhabiting the oak-galls of Illinois. <Proc. Ent. Soc. Phil., March, 1864, v. 2, pp. 443–500, fig.

Detailed observations proving the frequent occurrence of dimorphism in the *Cynipidæ*; *Cynips [= Amphibolips] aciculata*, a dimorphic form of *C. q. spongifica*; concludes from analogy "that *aciculata* ♀ generates galls which produce by parthenogenesis ♂ *spongifica* exclusively, and that ♀♀ *spongifica* coupling in June with these ♂♂ oviposit in the same month in the young buds of the oak, the eggs lying dormant till the following spring, when some of the eggs produce ♀ *spongifica* in June, and some ♀ *aciculata* in the autumn or early in the following spring, which last in their turn, as before mentioned, generate ♂ *spongifica* to appear in the following June;" interesting details concerning the history of the group are given; relations between the true gall-flies (*Psenides*) and parasitic *Cynipidæ* (*Inquilinæ*); classification and characters of the same; anatomical structure and homologies of the family; the list includes fifteen (15) species inhabiting the various oaks, with descriptions of their galls and of several new species; seven (7) species of *Inquilinæ* are described; for the new species, see the *Systematic Index*; the figures illustrate the anatomy of the abdomen and ovipositor.

42. WALSH, B. D. The four-humped Curculio. A new foe of the apple. <Valley Farmer. Reprint: <Prairie Farmer, 27 August, 1864, [v. 30], n. s., v. 14, p. 131, 2 figs. S.-b., No. 1, p. 28.

Description and figures of *Anthonomus quadrigibbus*, a foe of the apple; comparison with *Conotrachelus nenuphar* and *Anthonomus prunivida* [= *Coccotortus scutellaris*].

43. WALSH, B. D. On the pupa of the ephemeropterous genus *Batisca* Walsh. <Proc. Ent. Soc. Phil., August, 1864, v. 3, pp. 200-206, fig.

Description and figures of the pupa of *Batisca obesa* Say.

44. WALSH, B. D. On certain entomological speculations of the New England school of naturalists. <Proc. Ent. Soc. Phil., August-September, 1864, v. 3, pp. 207-249.

Discussion of statements, chiefly by Prof. L. Agassiz, upon questions in general entomology. The memoir is divided into sections; in the first, the distribution of insects in North America is discussed in opposition to the views of Agassiz; in the second section the Darwinian theory of the origin of species is discussed and some remarks on the variation of several species are added; in the third and fourth sections the statements of Prof. Agassiz regarding the worm-like larva stage of insects and the resemblances between the pupæ of insects and the Crustacea are discussed and criticised; in the fifth section the author argues that the relative rank of the different orders of insects must be determined from a consideration of all the characters of each order and not from the significance of any one character; the sixth section is a review of Dana's classification of insects on the principle of cephalization; and in the seventh section several erroneous statements and generalizations in the same author's paper on classification are pointed out.

45. WALSH, B. D. On phytophagous varieties and phytophagous species. <Proc. Ent. Soc. Phil., November, 1864, v. 3, pp. 403-430.

Many species feed exclusively upon a single food-plant, while other species feed upon many kinds; correlated with this are certain larval or imaginal differences; when these different forms interbreed they are considered the same species and are termed phytophagous varieties; these when separated with a single kind of food-plant form phytophagous races, and these again by a continuation of their isolation form phytophagous species. Phytophagous forms are most abundant where the imago is wingless. *Diapheromera velii*, *Tingis* [= *Gargaphia*] *tiliæ*, and *T.* [= *G.*] *amorphæ* are described as new; the following are mentioned in the remarks upon species and varieties: *Haltica* [= *Disonychia*] *alternata*, *Chrysomela* *scalaris*, *Clytus* [= *Cyllene*] *robinia*, *C.* [= *C.*] *pictus*, *Dryocampa* [= *Sphingicampa*] *bicolor*, *Sphingicampa* *distigma* [= *bicolor*], *Bombyx* [= *Sericaria*] *mori*, *Halisdota tessellaris*, *H. caryæ*, *H. antiphola* [= *tessellaris*], *Cynips* [= *Amphidolips*] *q. spongifica*, *C.* [= *Andricus*] *q. punctata*, *C.* [= *A.*] *q. podagræ*, and *C.* [= *Amphidolips*] *q. inanis*.

46. WALSH, B. D. On the insects, coleopterous, hymenopterous, and dipterous, inhabiting the galls of certain species of willow. Part 1st—Diptera. <Proc. Ent. Soc. Phil., December, 1864, v. 3, pp. 543-644.

Structural characters, habits, metamorphoses, etc., of *Cecidomyiæ*; remarks on the unity of habits in genera; synopsis of cecidomyioid galls of *Salix*; descriptions of new species, their galls and inquillines; for a list of the new species, see the *Systematic Index*. See No. 197 for Part 2d.

47. WALSH, B. D. The borer. <Colman's Rural World. Reprint: <Prairie Farmer, 6 May, 1865, v. 15, p. 355.

Notice of soap as a means against borers.

48. WALSH, B. D. The new potato-bug and its natural history. <Pract. Ent., 30 October, 1865, v. 1, pp. 1-4.

Record of the spread eastwards of *Doryphora 10-lineata*; description of the egg; food-plants, enemies, and means against the same; comparative characters of *D. juncta* and *D. 10-lineata*; species of *Meloidæ* injurious to the potato.

49. [WALSH, B. D.] The joint-worm. <Pract. Ent., 27 November, 1865, v. 1, pp. 11, 12.

Reasons for disbelieving that the joint-worm is the larva of one of the *Chalcididæ*.

50. WALSH, B. D. On phytophagic varieties and phytophagic species, with remarks on the unity of coloration in insects. <Proc. Ent. Soc. Phil., November-December, 1865, v. 5, pp. 194-216, fig. See: <Amer. Journ. Sci., September, 1865, ser. 2, v. 40, pp. 282-284. <Ann. and Mag. Nat. Hist., November, 1865, ser. 3, v. 16, pp. 383, 384.

Argues for the origin of races and species by phytophagic isolation; refers to *Datana ministra*, *D. contracta*, *Halisidota tessellaris*, *H. antiphola* [= *H. tessellaris*], *H. harrisi* [= *H. tessellaris*], *Arkopalus* [= *Cyllene*] *pictus*, *A.* [= *C.*] *robinie*, *A. infaustus* [= *C. decorus*], *Callidium antennatum*, *C. janthinum*, *Conotrachelus nenuphar*, *Doryphora 10-lineata*, and *D. juncta*; unity of coloration explained by assumption of a genetic connection between various species; figure showing bullæ on wing of *Ichneumon*.

51. WALSH, B. D. [Cicada years.] <Pract. Ent., 25 December, 1865, v. 1, pp. 18-19.

Answer to inquiry of M. S. Hill; Cicada districts of the United States, as given by Fitch in N. Y. Rept. I, p. 39; habits of *C.* [= *Tibicen*] *septendecim*.

52. WALSH, B. D. Insects injurious to vegetation in Illinois. <Trans. Ill. State Agric. Soc., 1865, v. 5, pp. 469-483, figs.

Notes on injurious insects in Illinois in 1861; life-history and ravages of *Leucania unipuncta*.

53. WALSH, B. D. The "Thrips" of the vine-growers. What is it? <Pract. Ent., 25 December, 1865, v. 1, pp. 20-21.

The *Thrips* of fruit-growers probably not a true *Thrips*; food-habits of *Thrips*.

54. WALSH, B. D. The grub-worm. <Colman's Rural World, December, 1865. S.-b., No. 1, p. 51.

Habits, ravages, and means against *Lachnosterna quercina* [= *fusca*]; its larva compared with that of *Ligyris relictus*; vernacular names of the *Lachnosterna* and of *Allorhina nitida*.

55. WALSH, B. D. Borers. <Pract. Ent., 29 January, 1866, v. 1, pp. 25-31, figs. 1-8.

Remarks on the name "borer;" figures, natural history, and means against *Saperda bivittata* [= *candida*], *Chrysobothris femorata*, *Bostrichus* [= *Amphicerus*] *bicaudatus*, *Ægeria* [= *Sannina*] *exitiosa*, *A. tipuliformis*, *Clytus* [= *Cyllene*] *robinie*, *C.* [= *C.*] *pictus*, and *Cerasphorus* [= *Chion*] *cinctus*; need of State aid against injurious insects.

56. [WALSH, B. D.] [*Attagenus?* injuring feathers.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.
Answer to inquiry of R. Parnell; ravages of and means against *Dermestidæ*.
57. [WALSH, B. D.] [Codling moth.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.
Answer to inquiry of Isaac Hicks; natural history and means against *Carpocapsa pomonella*.
58. [WALSH, B. D.] [*Aphididæ*.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.
Answer to inquiry of J. H. Foster, jr.; comparative characters of *Eriosoma* [= *Schizoneura*] *lanigera* and *Pemphigus pyri* [= *Schizoneura lanigera*].
59. [WALSH, B. D.] [Mites mistaken for plant-lice.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.
Answer to inquiry of W. M. Smith; distinctive characters of Insecta and Arachnida; description and habitat of the eggs of *Aphis mali*.
60. [WALSH, B. D.] [Saddle-back caterpillar.] <Pract. Ent., 26 February, 1866, v. 1, p. 34.
Answer to inquiry of S. P. M.; description of the larva and imago of *Empretia stimulea*; urticating properties of the larva.
61. W[ALSH], B. D. [Red-humped prominent.] <Pract. Ent., 26 February, 1866, v. 1, p. 35.
Answer to inquiry of E. D. Wright; life-habits of *Notodonta* [= *Edemasia*] *concinna*.
62. WALSH, B. D. The joint-worm. <Pract. Ent., 26 February, 1866, v. 1, pp. 37-38.
Habitats of the larva of *Cecidomyia destructor* and of *Eurytoma* sp.; criticism of A. Fitch's report upon the latter.
63. W[ALSH, B. D.]. Entomology all a humbug. <Pract. Ent., 26 February, 1866, v. 1, p. 39.
Fewness of entomologists and the multiplicity of their duties the reason why so little has been effected against noxious insects.
64. W[ALSH], B. D. [Cocoons of Ichneumon-flies.] <Pract. Ent., 26 March, 1866, v. 1, p. 46.
Answer to inquiry of M. S. Hill; life-habits of the *Microgasters*.
65. W[ALSH], B. D. [Mass of eggs.] <Pract. Ent., 26 March, 1866, v. 1, p. 46.
Answer to inquiry of T. R. Payne; characters and life-habits of *Orygia leucostigma*.
66. [WALSH, B. D.] [Apple-tree caterpillar; parasites.] <Pract. Ent., 26 March, 1866, v. 1, p. 46.
Answer to inquiries of G. E. Brackett; food-plants of *Clisiocampa americana*; characters and habits of *Tachinidæ*; habits of secondary parasites.
67. W[ALSH], B. D. Apple-tree borers. <Pract. Ent., 26 March, 1866, v. 1, p. 47.
Reprint, with remarks, of "Apple-tree borers" (Journ. of Commerce); extract from A. Fitch, of larval habits of *Saperda bivittata* [= *candida*].

68. WALSH, B. D. The white grub. <Pract. Ent., 30 April, 1866, v. 1, pp. 60-62.

Descriptions and habits of the larval states of *Lachnosterna quercina* [= *fusca*] and *Ligyris relictus*; ravages and food-habits of the former; the hog as a white-grub destroyer.

69. WALSH, B. D. [Apple-tree scales.] <Pract. Ent., 30 April, 1866, v. 1, p. 64.

Answer to inquiry of L. S. Pennington; descriptions and ravages of *Mytilaspis pomorum* and *Chionaspis furfurus*; *Coccinellidæ* as a means against the former; petroleum as a remedy against bark-lice.

70. WALSH, B. D. [Clothes-moths.] <Pract. Ent., 30 April 1866, v. 1, p. 64.

Answer to inquiry of S. Canby; habits and means against *Tineidæ*.

71. WALSH, B. D. [Poplar borer.] <Pract. Ent., 30 April, 1866, v. 1, p. 64.

Answer to inquiry of P. C. Truman; larva and imago of *Saperda calcarata* infesting cottonwood.

72. WALSH, B. D. [Worms in flour and rye.] <Pract. Ent., 30 April, 1866, v. 1, p. 64.

Answer to inquiry of L. D. Hunt; descriptions and habits of *Tenebrio molitor* and *Dermestes lardarius*.

73. WALSH, B. D. Popular remedies for noxious insects. <Pract. Ent., 28 May, 1866, v. 1, pp. 71-74.

Criticism of various worthless remedies against injurious insects.

74. WALSH, B. D. [*Serica iricolor* Say.] <Pract. Ent., 28 May, 1866, v. 1, p. 77.

Answer to inquiry of B. F. Seibert; description, ravages, and habitat of *Serica iricolor*.

75. WALSH, B. D. [Measuring-worms.] <Pract. Ent., 28 May, 1866, v. 1, p. 77.

Answer to inquiry of T. Siveter; habits of *Ennomos magnaria* [= *alniaria*]; food-plants, habits, and means against *E.* [= *Eudalimia*] *subsignaria* and *Anisopteryx* [= *Paleacrita*] *vernata*.

76. WALSH, B. D. [*Lygus pratensis*.] <Pract. Ent., 25 May, 1866, v. 1, pp. 77-78.

Answer to inquiry of H. B. Howarth; habits and odors of *Lygus pratensis*; changes insects pass through.

77. WALSH, B. D. [Apple-tree insects.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of C. Cooke; an unnamed tineid moth raised from cocoons off twigs of apple-tree; *Hemiteles* sp. and *Microgaster* sp. bred from cocoons attached to eggs of *Clisiocampa americana*.

78. WALSH, B. D. [Destructive currant-worm.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of W. M. Smith; cocoon and sexual characters of *Nematus ribis* [= *ribesii*].

79. WALSH, B. D. [Egg slits made by Homoptera.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of C. Dadant; slits in pear-twigs caused by *Chloroneura malefica* [= *Empoasca viridescens*]; *Preconia* [= *Oncomelopia*] *undata* oviposits in grape-vines.

80. WALSH, B. D. [Plant-lice.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of J. Flournoy; characters, habits, enemies, and means against *Aphididae*.

81. WALSH, B. D. [Insects injuring plum-trees.] <Pract. Ent., 28 May, 1866, v. 1, p. 78.

Answer to inquiry of A. C. Hammond; *Egeria* [= *Sannina*] *exitiosa* and an elaterid larva attacking plum-trees; the latter probably attracted by decayed matter, the work of the peach borer.

82. WALSH, B. D. Prof. Dana and his entomological speculations. <Proc. Ent. Soc. Phil., May-June, 1866, v. 6, pp. 116-121.

Rejoinder to J. D. Dana's reply to criticism upon the classification of insects.

83. WALSH, B. D. Clover-worms. <Pract. Ent., 25 June, 1866, v. 1, pp. 82-83.

Summary of published observations concerning *Asopia costalis*; points which need explanation; probable remedy.

84. WALSH, B. D. Click-beetles. <Pract. Ent., 25 June, 1866, v. 1, p. 83.

Note to W.'s "Click-beetles;" snapping of *Elateridae*; Jaeger's Life of N. Am. Insects and Emmons' N. Y. Report unreliable.

85. WALSH, B. D. Cut-worms. <Pract. Ent., 25 June, 1866, v. 1, pp. 85-86.

Definition, food-habits, and means against cut-worms; climbing habits; cut-worms in California. See Nos. 229, 281.

86. WALSH, B. D. The canker-worm. Finding a mare's nest. <Pract. Ent., 25 June, 1866, v. 1, p. 87.

Criticism of communication in Western Rural; improbability of the report that *Anisopteryx* [= *Paleacrita*] *vernata* deposits her eggs on the ground.

87. WALSH, B. D. Driving nails into fruit trees. <Pract. Ent., 25 June, 1866, v. 1, pp. 87-88.

Uselessness of nails as a means against borers; extracts from various sources, with comments.

88. WALSH, B. D. The new potato-bug. <Pract. Ent., 25 June, 1866, v. 1, pp. 88-89.

Records *Doryphora 10-lineata* at Bloomington and Athens, Ill.; rate of its eastern progress; need of legislative action against injurious insects.

89. WALSH, B. D. [The painted borer.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of T. C. Wright; sexual difference in the antennæ of *Clytus* [= *Cyllene*] *pictus* bred from hickory.

90. WALSH, B. D. [Bug allied to the chinch-bug.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of H. B. Howarth; comparative characters of *Blissus leucopterus* and an unnamed lygæid of similar habits.

91. WALSH, B. D. [Canker-worms.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of C. H. W. Wood; means against *Anisopteryx*.

92. WALSH, B. D. [Apple-tree tineid.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of C. Cooke; food-plant of *Bucculatrix pomifoliella*.

93. WALSH, B. D. [Spittle insect.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of M. V. B. Hathaway; life-habits of species of *Aphrophora*.

94. WALSH, B. D. [Insects named.] <Pract. Ent., 25 June, 1866, v. 1, p. 89.

Answer to inquiry of E. Hall; occurrence of *Doryphora 10-lineata* at Athens, Ill.; *Hippodamia* [= *Megilla*] *maculata* devours the eggs of the same; two species of *Cassida* affect the sweet-potato.

95. WALSH, B. D. [Longicorn borers.] <Pract. Ent., 25 June, 1866, v. 1, p. 90.

Answer to inquiry of Dr. Trimble; food-habits of *Orthosoma cylindricum*, [= *brunneum*], *Prionus laticollis*, and *P. imbricornis*.

96. WALSH, B. D. [Canker-worms.] <Pract. Ent., 25 June, 1866, v. 1, p. 90.

Answer to inquiry of F. K. Phoenix; season of oviposition of *Anisopteryx*.

97. WALSH, B. D. [White-pine scale.] <Pract. Ent., 25 June, 1866, v. 1, p. 90.

Answer to inquiry of H. Shimer; *Aspidiotus* [= *Chionaspis*] *pinifolii* infesting *Pinus strobus*.

98. WALSH, B. D. Doctors differ. <Pract. Ent., 30 July, 1866, v. 1, p. 96.

Criticism of communications in agricultural papers; tanners' oil injurious to trees; sulphur plugged in trees does not protect the leaves; sheep in an orchard do not keep away *Conotrachelus nenuphar*.

99. WALSH, B. D. The grain plant-louse. <Pract. Ent., 30 July, 1866, v. 1, pp. 96-97.

The insect attacking small grains in Georgia is probably a plant-louse.

100. WALSH, B. D. Popular names for insects. <Pract. Ent., 30 July, 1866, v. 1, p. 97.

The use of the same vernacular name for different insects causes uncertainty in identifying and in suggesting means against injurious insects.

101. WALSH, B. D. Scientific names. <Pract. Ent., 30 July, 1866, v. 1, pp. 97-99.

Explains the necessity of using Latin for scientific names.

102. WALSH, B. D. [Grape-vine insects.] <Pract. Ent., 30 July, 1866, v. 1, pp. 99-100.

Answer to inquiry of C. S. Jackson; habits of an undescribed *Fidia*; injuries to vines by plant-louse (*Aphis vitis* ?); enemies of *Aphididae*.

103. WALSH, B. D. [Wire-worms.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of A. D. Chesebro; summer fallowing as a means against wire-worms.

104. WALSH, B. D. [Bark-lice.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of L. E. Harmon; life-history and means against *Coccida*.

105. WALSH, B. D. [Tortoise beetles.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of C. K. Yant; food-plants and larval habits of *Cassida*.

106. WALSH, B. D. [Grape bark-louse.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of J. Bird; description and ravages of *Lecanium* [= *Pulvinaria*] *vitis*.

107. WALSH, B. D. [Plum bark-louse.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of O. B. Douglas; description of *Lecanium* sp.

108. WALSH, B. D. [Saw-fly eggs.] <Pract. Ent., 30 July, 1866, v. 1, p. 100.

Answer to inquiry of L. D. Morse; position of saw-fly eggs on oak-leaf; characters of the larvæ of *Tenthredinidae*.

109. WALSH, B. D. [Wheat midge.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of R. F.; ravages, description, habits, and means against *Cecidomyia* [= *Diplosis*] *tritici*.

110. WALSH, B. D. [Wheat midge.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of M. H. Boye; *Cecidomyia* [= *Diplosis*] *tritici* not infrequently passes from larval to imaginal state in the same season; means against the same.

111. WALSH, B. D. [Grape galls.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of J. H. Foster, jr.; description of the galls and larvæ of *Cecidomyiidae*.

112. WALSH, B. D. [Apple-tree web-caterpillar.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of Marion Hobart; description of the eggs of *Clisiocampa americana*; food-plants of the same and of *Hyphantria textor* [= *cunea*].

113. WALSH, B. D. [Grape-vine beetles.] <Pract. Ent., 30 July, 1866, v. 1, p. 101.

Answer to inquiry of M. S. Hill; food-habits of the larva and imago of *Pelidnota punctata* and of *Anomala lucicola*.

114. WALSH, B. D. [Bot. flies.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of J. B. Fisher; habits and hosts of several species of *Estridæ*; parasite infesting *Triplax* [= *Tritoma*] *thoracica*. See No. 153.

115. WALSH, B. D. [Spruce-tree saw-flies.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of J. Barratt; description of cocoon and imago of *Lophyrus abietis*; means against the same. See Pract. Ent., v. 1, p. 114.

116. WALSH, B. D. [Stings of insects.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of A. O. Brickman; effects of the stings of bees and other insects.

117. WALSH, B. D. [Blackberry scale.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of G. E. Brackett; characters of *Leocanium* sp. infesting blackberry.

118. WALSH, B. D. [Eggs in sumach.] <Pract. Ent., 30 July, 1866, v. 1, p. 102.

Answer to inquiry of W. M. Smith; eggs of *Orechelimum* sp.? or *Xiphidium* sp.? in pith of sumach.

119. W[ALSH], B. D. The "new potato-bug" in Maine. <Pract. Ent., 27 August, 1866, v. 1, p. 105.

Extract from Maine Farmer, 26 July, 1866, with comments; the larva of *Lema trilineata* mistaken for that of *Doryphora 10-lineata*.

120. WALSH, B. D. [The army-worm.] <Pract. Ent., 27 August, 1866, v. 1, p. 107.

Extract from Western Rural, 21 July, 1866, with comments; army-worm mistaken for canker-worm; need of precision in using popular names.

121. W[ALSH], B. D. [Fire-cure for potato-beetles.] <Pract. Ent., 27 August, 1866, v. 1, pp. 107-108.

Extract from letter from M. S. Hill, with comments; burning straw effective as a means against *Meloidæ* infesting potato-vines; its use against *Doryphora 10-lineata*; hot water as a means against the onion-maggot and peach-borer.

122. WALSH, B. D. A new humbug. <Pract. Ent., 27 August, 1866, v. 1, pp. 108-110.

Exposure of proposed remedy against *Cecidomyia destructor*; life-habits of the same.

123. W[ALSH], B. D. The striped bug. <Pract. Ent., 27 August, 1866, v. 1, p. 110, figs. 1, 2.

Extract from Western Rural, 21 July, 1866, with comments; characters, habits, means against, and figures of *Diabrotica vittata* and *D. 12-punctata*. See No. 148.

124. WALSH, B. D. [Grape-vine caterpillars.] <Pract. Ent., 27 August, 1866, v. 1, p. 111.

Answer to inquiry of B. Borden; description of the early stages of *Procris* [= *Acolithus*] *falsarius*; characters and habits of the species of *Procris*.

125. WALSH, B. D. [Squash-vine insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 111.

Answer to inquiry of J. Cope; description and habits of *Epilachna borealis*; habits of *Coccinellidæ*; description and means against the larva of *Trochilium cucurbitæ* [= *Melittia ceto*].

126. WALSH, B. D. [Injurious insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 111.

Answer to inquiry of T. Conard; larval habits and means against *Lema trilineata*; work of the grain plant-louse (*Nectarophora granaria*) and of *Trochilium cucurbitæ* [= *Melittia ceto*]; mention of some of the enemies of bees.

127. WALSH, B. D. [Grape-leaf galls.] <Pract. Ent., 27 August, 1866, v. 1, pp. 111, 112.

Answer to inquiry of E. Daggy; description of the leaf-gall of *Phyllozera vitifoliæ* [= *vastatrix*]; reasons for including it in the *Coccidæ*; dipterous enemy of the same. See No. 154.

128. WALSH, B. D. [Grape-vine insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 112.

Answer to inquiry of W. H. S.; description and means against an undescribed gall on the tendrils and leaf-stalks of a grape-vine; life-habits of parasitic *Chalcididæ*. See No. 160.

129. WALSH, B. D. [Grape-vine beetles.] <Pract. Ent., 27 August, 1866, v. 1, pp. 112, 113.

Answer to inquiry of W. J. Lawrence; food-habits of *Pelidnota punctata* and of *Colaspis flavida*.

130. WALSH, B. D. [*Corydalis cornutus*.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of J. S. Lewis; natural history and habits of *Corydalis cornutus*.

131. WALSH, B. D. [Tobacco-moth.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of F. W. Noble; transformations and food-plants of *Sphinx* [= *Protoparce*] *carolina*; food-plants of *S. 5-maculata* [= *P. celeus*].

132. WALSH, B. D. [*Datana ministra*.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of S. S. Lacy; food-plants and transformations of *Datana ministra*.

133. WALSH, B. D. [Grape-vine and fuschia beetles.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of F. K. Phoenix; *Colaspis flavida* injurious to grape-vine shoots; *Haltica exapta* [= *carinata*] destructive to fuschia; means against flea-beetles.

134. WALSH, B. D. [Blister-beetles.] <Pract. Ent., 27 August, 1866, v. 1, p. 113.

Answer to inquiry of J. Barber; food-plants of *Lytta marginata* [= *Epicauta cinerea*], *L.* [= *E.*] *vittata*, *L. atrata* [= *E. pennsylvanica*], and *L. cinerea* [= *Macrobasis unicolor*].

135. WALSH, B. D. [*Colaspis flavida*; *Lema trilineata*.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of J. F. Benner; *Colaspis flavida* destructive to grape-vines; distribution and method of breeding *Lema trilineata*.

136. WALSH, B. D. [Green worms on gooseberries and currants; *Lema trilineata*.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of H. Burt; gooseberries and currants injured by larva of a saw-fly?; effects of excessive rain, heat, and drought; food-plants of *Lema trilineata*.

137. WALSH, B. D. [Galls.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of H. Shimer; note of galls made by *Rhodites radicum*, *Trypeta solidaginis*, and *Thelaxes* [= *Colopha*] *ulmicola*.

138. WALSH, B. D. [Potato and corn insects.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of T. H. Parsons; scarcity of *Lema trilineata* in Illinois; *Doryphora 10-lineata* destroyed by turkeys, but not by fowls; *Gortyna* sp. ? injurious to young Indian corn; rules for breeding insects.

139. WALSH, B. D. [Cocoons on apple-trees.] <Pract. Ent., 27 August, 1866, v. 1, p. 114.

Answer to inquiry of M. S. Hill; description of cocoon and imago of *Attacus cecropia*; the interaction of organisms.

140. WALSH, B. D. Imported insects; the gooseberry saw-fly. <Pract. Ent., 29 September, 1866, v. 1, pp. 117-125, fig.

List of some injurious European insects imported into America and of American insects imported into Europe; reasons for the increase and abundance of noxious European insects in America, and why American species do not flourish in Europe; natural history, description, and means against *Nematus ventricosus* [= *ribesii*]; figure of currant-leaf, showing method of deposition of eggs and work of larva; natural history and description of larva and imago of *Pristiphora grossulariæ* n. sp.; number of saw-flies infesting the gooseberry and currant in Europe.

141. WALSH, B. D. [Borers.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of W. H. R. Lykins; western distribution of *Clytus* [= *Cyllene*] *robiniaæ*.

142. WALSH, B. D. [Wheat midge.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.

Answer to inquiry of C. P. Wickersham; destructiveness of *Cecidomyia* [= *Diplosis*] *tritici*; nature of its cocoon.

143. WALSH, B. D. [Crickets.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.
 Answer to inquiry of Marion Hobart; characters and food-habits of *Acheta* [= *Gryllus*] *abbreviatus*; katydids not exclusively vegetarians; *Eoanthus niveus* found feeding on plant-lice.
144. WALSH, B. D. [Walking-stick.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.
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145. WALSH, B. D. [Apple-tree insects.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.
 Answer to inquiry of H. B. Beegle; characters and food-plants of *Limnitis urula*; description and food-plants of the larva of *Lagoa opercularis*; characters of the imago.
146. WALSH, B. D. [Mites on grasshoppers.] <Pract. Ent., 29 September, 1866, v. 1, p. 126.
 Answer to inquiry of W. Riddell; *Astoma* [= *Trombidium*] *locustarum* infesting *Caloptenus femur-rubrum*.
147. W[ALSH], B. D. Grasshoppers and locusts. <Pract. Ent., October, 1866, v. 2, pp. 1-5, 22.
 Description, migration, and ravages of *Caloptenus spretus*; limits of its range and means of preventing its increase; confusion caused by the use of popular names of insects. On p. 22 a "note," accidentally omitted, gives the comparative length of the wing-covers and antennæ of *Caloptenus spretus* and *C. femur-rubrum*.
148. W[ALSH], B. D. The striped cucumber-bug. <Pract. Ent., October, 1866, v. 2, p. 5.
Diabrotica vittata attacks German asters. See No. 123.
149. W[ALSH], B. D. Fire-blight. <Pract. Ent., October, 1866, v. 2, p. 7.
 Extract from Horticulturist, with comments; cause of fire-blight unknown; not produced by *Scolytus* [= *Xyleborus*] *pyri*.
150. W[ALSH], B. D. The Hessian fly. <Pract. Ent., October, 1866, v. 2, p. 7.
 Extract from Colman's Rural World, with comments; late sowing as a means against *Cecidomyia destructor*.
151. [WALSH, B. D.] [Injurious caterpillars; plant-lice enemies.] <Pract. Ent., October, 1866, v. 2, pp. 7-8.
 Answer to inquiry of T. McGraw; habits, descriptions, and food-plants of larva of *Dryocampa senatoria* and of *Datana ministra*; food-habits of larva allied to *D. ministra*; description and habits of larva of *Seymouria* sp.; *S. hæmorrhous*? bred from gall of *Thelaxes* [= *Colophya*] *ulmicola*.
152. [WALSH, B. D.] [Tomato-worm.] <Pract. Ent., October, 1866, v. 2, p. 8.
 Answer to inquiry of A. A. Jackson; description of the larva and pupa of *Protoparce celens*; food-plants and harmlessness of the larva.

153. [WALSH, B. D.] [Dipterous larva on swallows.] <Pract. Ent., October, 1866, v. 2, p. 8.

Answer to inquiry of J. B. Fisher; larvæ found on swallows (see No. 114) belong to the *Muscidæ* and not to the *Cestridæ*; extract from letter of Osten Sacken on larval habits of *Muscidæ* found with birds.

154. [WALSH, B. D.] [Bark-louse enemy.] <Pract. Ent., October, 1866, v. 2, p. 8.

Answer to inquiry of E. Daggy; see No. 127; according to Osten Sacken the bark-louse enemy belongs to *Leucopsis*; systematic position of the genus.

155. [WALSH, B. D.] [Parasitized tomato-worm.] <Pract. Ent., October, 1866, v. 2, pp. 8-9.

Answer to inquiry of T. C. Wright; habits of *Microgaster*, parasitic on *Protoparce celeus*; habits of ichneumonized larvæ.

156. [WALSH, B. D.] [Beetles on buttercup and azalea.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of C. H. Peck; identification of *Galeruca* [= *Adimonia*] *rufosanguinea*, found on *Ranunculus acris*, and of *Prasocuris varipes* on *Azalea nudiflora*; synoptic table, by J. L. Leconte, of the species of *Prasocuris*.

157. [WALSH, B. D.] [Flying-bug.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of E. E. Sheldon; *Aphodius* mistaken for *Cecidomyia destructor*.

158. [WALSH, B. D.] [Parasitic cocoon.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of H. W. Howarth; description of cocoons made by *Microgaster* and *Pezomachus*; habits of *Ichneumonidæ*.

159. [WALSH, B. D.] [Oak-bark louse.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of T. Meehan; undetermined *Coccus* on red-oak.

160. [WALSH, B. D.] [Grape-galls.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of W. H. S.; see No. 128; larva of *Leucopsis* sp., an enemy to grape-vine gall-louse; probable identity of the maker of the tendril and leaf-galls; varieties of grape infested by *Phylloxera vastatrix*.

161. [WALSH, B. D.] ["Saddle-back."] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of T. M. Harvey; food-plants, description, and urticating properties of *Empretia stimulea*.

162. [WALSH, B. D.] [Corn-worm.] <Pract. Ent., October, 1866, v. 2, p. 9.

Answer to inquiry of J. B. Ellis; method of work of two lepidopterous larvæ.

163. [WALSH, B. D.] [Insects named.] <Pract. Ent., October, 1866, v. 2, p. 10.

Answer to inquiry of W. C. Fish; comparative characters of *Entilia sinuata* and *E.* [= *Pubilia*] *concava*.

164. [WALSH, B. D.] [Grape insects.] <Pract. Ent., October, 1866, v. 2, p. 10.
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165. [WALSH, B. D.] [*Datana ministra*.] <Pract. Ent., October, 1866, v. 2, p. 10.
Answer to inquiry of J. B.; increase of injuries caused by *Datana ministra*; distinctive characters of the larvæ of *Geometridæ*.
166. [WALSH, B. D.] [*Iulus marginatus*.] <Pract. Ent., October, 1866, v. 2, p. 10.
Answer to inquiry of T. Wiggins; characters and food of *Iulus* [= *Spirobolus*] *marginatus*.
167. [WALSH, B. D.] [Midge.] <Pract. Ent., October, 1866, v. 2, p. 10.
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168. [WALSH, B. D.] [Rat-tailed larva.] <Pract. Ent., October, 1866, v. 2, p. 10.
Answer to inquiry of J. A. Lapham; characters and habitats of the larvæ of rat-tailed *Syrphidæ*.
169. [WALSH, B. D.] [Beetle on thistle.] <Pract. Ent., October, 1866, v. 2, p. 10.
Answer to inquiry of W. S. Robertson; characters and food-plants of *Phyllobrotica* [= *Diabrotica*] *longicornis*.
170. [WALSH, B. D.] [Grape-vine *Aphis*.] <Pract. Ent., October, 1866, v. 2, p. 10.
Answer to inquiry of H.; grape-vine injured by *Aphis vitis*.
171. WALSH, B. D. The new potato-bug. <Pract. Ent., November, 1866, v. 2, pp. 13-16, fig.
Eastern progress of *Doryphora 10-lineata*; rate of travel; hand-picking the only effective remedy; description of a horse machine for their destruction; pecuniary loss inflicted by the species.
172. WALSH, B. D. The canker-worm <Pract. Ent., November, 1866, v. 2, p. 16.
Tarring trees effective against *Paleacrita vernata*.
173. WALSH, B. D. The canker-worm again. <Pract. Ent., November, 1866, v. 2, pp. 16-17.
Critical review of article in New England Farmer; value of tarring as a means against *Paleacrita vernata*.
174. WALSH, B. D. Notes by Benj. D. Walsh. <Pract. Ent., November, 1866, v. 2, pp. 19-20.
Remarks on statement of H. Shimer in his paper, "The grape leaf gall-ococcus" (Pract. Ent., pp. 17-19); number of eggs to each ♀; tendril and leaf-galls probably produced by the same insect; old leaves entirely free from bark-lice by the end of summer; characters of the pupa of *Leucopis*; systematic position and food-habits of *Thysanoptera*; criticism of paper by H. Shimer in Prairie Farmer, 3 November, 1861.

175. W[ALSH], B. D. The striped bug. <Pract. Ent., November, 1866, v. 2, p. 20.
Remarks on note by A.; effects of plaster as a means against *Diabrotica vittata*.
176. [WALSH, B. D.] [Currant insects; *Psocus venosus*.] <Pract. Ent., November, 1866, v. 2, p. 20.
Answer to inquiry of I. Hicks; occurrence of *Pristiphora grossularis* in the Eastern States; *Ellopta* [= *Eufitchia*] *ribearia* injurious to currant; date of introduction of "sulphur-cure" on peach-trees; characters and habits of *Psocus venosus*.
177. [WALSH, B. D.] [Worm in apple.] <Pract. Ent., November, 1866, v. 2, pp. 20-21.
Answer to inquiry of C. Ward; description and ravages of larva of *Trypeta pomonella*?
178. [WALSH, B. D.] [Insects attracted to light.] <Pract. Ent., November, 1866, v. 2, p. 21.
Answer to inquiry of Practical Pomologist; conditions favorable for attracting insects to light; kinds most frequently attracted; the proportion of injurious species attracted.
179. [WALSH, B. D.] [Zebra caterpillar.] <Pract. Ent., November, 1866, v. 2, p. 21.
Answer to inquiry of J. H. Parsons; description of the larva of *Mamestra picta*; times of transformation.
180. [WALSH, B. D.] [Inquiries answered.] <Pract. Ent., November, 1866, v. 2, p. 21.
Answer to inquiry of J. Pettit; identification of several beetles; galls on golden-rod made by *Euryptychia saligneana* and *Trypeta solidaginis*; characters of short-winged form of *Micropus* [= *Blissus*] *leucopterus*; its occurrence in Canada.
181. [WALSH, B. D.] [Worm in corn.] <Pract. Ent., November, 1866, v. 2, pp. 21-22.
Answer to inquiry of J. B. Ellis; description of larva, habits, transformations, and means against an undetermined noctuid.
182. [WALSH, B. D.] [Bag-worms.] <Pract. Ent., November, 1866, v. 2, p. 22.
Answer to inquiry of C. P. Wickersham; characters and synonymy of *Thyridopteryx ephemeraformis*.
183. [WALSH, B. D.] [Ichneumon cocoons.] <Pract. Ent., November, 1866, v. 2, p. 22.
Answer to inquiry of S. A. N.; characters of cocoons of *Microgaster* sp.?
184. WALSH, B. D. Note. <Proc. Ent. Soc. Phil., December, 1866, v. 5, p. 260.
Withdraws assertion attributed to C. R. Osten Sacken.
185. W[ALSH], B. D. The old-fashioned potato-bugs. <Pract. Ent., December, 1866, v. 2, pp. 25-27, figs.
Natural history and means against *Lema trilineata*, *Lytta* [= *Epicauta*] *vittata*, *L. atrata* [= *E. pennsylvanica*], *L. marginata* [= *E. cinerea*], and *L. cinerea* [= *Macrobasis unicolor*]; figures *L. trilineata* and *E. vittata*.

186. W[ALSH], B. D. Klippart's wheat plant. <Pract. Ent., December, 1866, v. 2, pp. 27-29.
Adverse criticism of the entomological portion of the above-named book.
187. W[ALSH], B. D. Trimble's insect enemies of fruit and fruit trees. <Pract. Ent., December, 1866, v. 2, pp. 29-30.
Favorable review of the above-named book.
188. W[ALSH], B. D. Answer to the above, by B. D. W. <Pract. Ent., December, 1866, v. 2, pp. 31-33, figs.
Answers to questions asked in J. S. Houghton's "Insects in the Orchard" (Pract. Ent., pp. 30-31); food-habits and hibernation of *Conotrachelus nenuphar*; comparative characters and figures of *Aspidiotus conchiformis* [= *Mytilaspis pomorum*] and *Coccus harrisii* [= *Chionaspis furfurus*]; natural history of *C. harrisii*; means against and enemies of the two species; figures *Chilocorus bivulnerus* and *Hippodamia* [= *Megilla*] *maculata*; food-habits and synonymy of *Lytta* [= *Pomphopœa*] *sayi*; flowing as a means against root-feeding insects; inefficacy of salt, lime, ashes, etc., against the same; insects attacking evergreens not likely to injure fruit trees; cannibal habits of spiders; habits of bees and wasps.
189. [WALSH, B. D.] [Cicada; gooseberry-worm.] <Pract. Ent., December, 1866, v. 2, p. 33.
Answer to inquiry of M. S. Hill; *Cicada* [= *Tibicen*] *septendecim* compared with an undescribed species; ravages of *Pristiphora grossularia*? on gooseberry bushes.
190. [WALSH, B. D.] [*Vespidæ*.] <Pract. Ent., December, 1866, v. 2, pp. 33, 34.
Answer to inquiry of M. Hobart; life-habits of *Vespidæ*.
191. [WALSH, B. D.] [Meal-worms: Timber-borers.] <Pract. Ent., December, 1866, v. 2, p. 34.
Answer to inquiry of M. C. D.; characters, food-habits, and means against *Tenebrio molitor* and *T. obscurus*; characters of *Ptinus brunneus* infesting pine timber; corrosive sublimate as a means against timber insects.
192. [WALSH, B. D.] [Corn-worm.] <Pract. Ent., December, 1866, v. 2, p. 34.
Answer to J. B. Ellis; number of broods of *Heliothis armigera* in the Northern and Southern States.
193. [WALSH, B. D.] [Thousand-legged worms.] <Pract. Ent., December, 1866, v. 2, pp. 34-35, fig.
Answer to inquiry of G. W. Robinson; description and figure of *Iulus multi-striatus* n. sp. [= *Cambala annulata*]; habits and means against the same.
194. [WALSH, B. D.] [Cranberry-galls, etc.] <Pract. Ent., December, 1866, v. 2, p. 35.
Answer to inquiry of W. C. Fish; occurrence of galls made by *Cecidomyia* sp. on leaves of cranberry; identification of several insects.
195. [WALSH, B. D.] Another humbug. <Pract. Ent., December, 1866, v. 2, p. 35.
Extract, with comments, from Cultivator and Country Gentleman, 22 November, 1866, exposing worthlessness of P. B. Sheldon's composition for destroying borers.

196. [WALSH, B. D.] Notices. <Pract. Ent., December, 1866, v. 2, p. 35.

Mention of several agricultural journals.

197. WALSH, B. D. On the insects, coleopterous, hymenopterous, and dipterous, inhabiting the galls of certain species of willow. Part 2d and last. <Proc. Ent. Soc. Phil., December, 1866-January, 1867, v. 6, pp. 223-288.

See No. 46 for Part 1st. Supplementary notes on the *Cecidomyidæ* (gall-makers and guest-flies); criticism of statements of Fitch and Harris; discussion of structure and habits of *Tenthredinidæ* and insects generally; synopsis of tenthredinidous willow-galls; descriptions of the galls, their makers andinquillines; for the new species described, see the *Systematic Index*; remarks on species and varieties; figures fore-wings of *Tenthredo* and *Ichneumon*.

198. W[ALSH], B. D. Plant-lice—their friends and enemies. <Pract. Ent., January, 1867, v. 2, pp. 37-44, figs.

Method of work and mode of reproduction of *Aphididæ*; their relations to ants; plant-lice enemies; figures *Aphis mali* and several enemies of plant-lice; means against *Aphididæ*.

199. W[ALSH], B. D. Birds *versus* insects. <Pract. Ent., January, 1867, v. 2, pp. 44-47.

Insectivorous birds not necessarily beneficial; a bird must be shown to eat at least thirty (30) times as many injurious insects as it does beneficial ones before it can be considered useful.

200. [WALSH, B. D.] [Insects named.] <Pract. Ent., January, 1867, v. 2, p. 47.

Answer to inquiry of J. Pettit; identification of many species, mostly beetles; characters and food-habits of *Clerus nigripes* [= *4-guttatus*]; habitat of *Lep-tura capitata* and *Tingis* [= *Corythuca*] *ciliata*.

201. [WALSH, B. D.] [Apple-tree insects.] <Pract. Ent., January, 1867, v. 2, p. 47.

Answer to inquiry of M. Hobart; increasing distribution of *Aspidiotus conchiformis* [= *Mytilaspis pomorum*]; enemies of the same; characters of the eggs of *Aphis mali*.

202. [WALSH, B. D.] [Work in entomology.] <Pract. Ent., January, 1867, v. 2, p. 47.

Answer to G. Scarborough; advice for the study of entomology by beginners.

203. W[ALSH], B. D. The true *Thrips* and the bogus *Thrips*. <Pract. Ent., February, 1867, v. 2, pp. 49-52, figs.

Natural history, characters, habits, and figures of *Thrips* sp.; characters of the larva and imago of *Halicta chalybea*; figure of imago; habits of species of *Erythroneura* [= *Typhlocyba*]; description and figures of *E.* [= *T.*] *vitis*.

204. W[ALSH], B. D. Universal remedies. <Pract. Ent., 1867, v. 2, p. 52.

Exposure of proposed universal remedy against fruit-tree insects.

205. W[ALSH], B. D. Poisoning noxious insects. <Pract. Ent., February, 1867, v. 2, pp. 52-53.

Sugaring with poison as a means against *Noctuidæ*.

206. W[ALSH], B. D. Remarks by B. D. W. <Pract. Ent., February, 1867, v. 2, p. 54.
Comments on S. S. Rathvon's "Bag-worms" (Pract. Ent., pp. 53-54); distribution and food-plants of *Thyridopteryx ephemeraformis*.
207. W[ALSH], B. D. Habits of the tree-cricket (*Ecanthus niveus*). <Pract. Ent., February, 1867, v. 2, p. 54, figs.
Characters of eggs and method of deposition; characters, food-habits, and figures of the imago.
208. [WALSH, B. D.] Importing European parasites. <Pract. Ent., February, 1867, v. 2, pp. 54-55.
Imaginary correspondence between Asa Fitch and John Curtis on the importation of parasitic insects.
209. [WALSH, B. D.] [Screw-worm.] <Pract. Ent., February, 1867, v. 2, p. 55.
Answer to inquiry of L. D. Morse; undetermined larva found in osage-orange seed; hominivorous habits of *Lucilia macellaria*.
210. [WALSH, B. D.] [*Attacus cecropia*.] <Pract. Ent., February, 1867, v. 2, p. 55.
Answer to inquiry of T. T. Smith; characters of larva and imago of *Attacus cecropia*; food-plants; method of issuance from cocoon; nature of fluid discharged when emerging from cocoon.
211. [WALSH, B. D.] [Apple-worm.] <Pract. Ent., February, 1867, v. 2, pp. 55-56.
Answer to inquiry of W. C. Fish; characters of the pupa of *Sciara mali*.
212. [WALSH, B. D.] [Oak-gall.] <Pract. Ent., February, 1867, v. 2, p. 56.
Answer to inquiry of W. Muir; characters of an undetermined cynipid gall on oak.
213. [WALSH, B. D.] [*Cicada*: Grape-vine *Procris*.] <Pract. Ent., February, 1867, v. 2, p. 56.
Answer to inquiry of M. S. Hill; variations in the imago of *Cicada* [= *Tibicen*] *septendecim* and in the song of the same; characters of the larva of *Procris* [= *Harrisina*] *americana*.
214. [WALSH, B. D.] [*Nitidulidæ*.] <Pract. Ent., February, 1867, v. 2, p. 56.
Answer to inquiry of W. H. S.; food-habits of *Ips fasciatus* and *Nitidula bipustulata*.
215. [WALSH, B. D.] [Turnip enemy.] <Pract. Ent., February, 1867, v. 2, p. 56.
Answer to inquiry of F. T. Pember; characters and food-habits of *Polydesmus complanatus*.
216. [WALSH, B. D.] [Wheat midge.] <Pract. Ent., February, 1867, v. 2, p. 57.
Answer to inquiry of C. P. Wickersham; nature of the membrane enveloping the full-grown larva of *Diplosis tritici*.

217. [WALSH, B. D.] [Queries answered.] <Pract. Ent., February, 1867, v. 2, p. 57.
Answer to inquiry of R. Middleton; toads, frogs, and spiders beneficial; effects of the stings of various insects.
218. [WALSH, B. D.] [Scales.] <Pract. Ent., February, 1867, v. 2, p. 57.
Answer to inquiry of M. M. S.; characters and ravages of scales on oleander and orange; means against *Coccidæ*.
219. [WALSH, B. D.] [Hundred-legged worm.] <Pract. Ent., February, 1867, v. 2, p. 57.
Answer to inquiry of S. P. Monks; identification of *Polydesmus virginensis*; distinctive characters of Myriapoda.
220. [WALSH, B. D.] [Bark-borers.] <Pract. Ent., February, 1867, v. 2, pp. 57-58.
Answer to inquiry of C. V. Riley; synoptic table and food-habits of several species of *Scolytus*; descriptions of *S. fagi* n. sp. and *S. caryæ* n. sp. [= *4-spinosus*].
221. [WALSH, B. D.] [Aleurodes.] <Pract. Ent., February, 1867, v. 2, p. 58.
Answer to inquiry of D. F. C.; characters and food-plants of an undescribed species of *Aleurodes*.
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238. W[ALSH], B. D. ["Bushels of butterflies."] <Pract. Ent., March, 1867, v. 2, p. 71.
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241. [WALSH, B. D.] [Food of katydids.] <Pract. Ent., March, 1867, v. 2, p. 72.
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242. [WALSH, B. D.] [Caterpillar nest on wild cherry.] <Pract. Ent. March, 1867, v. 2, p. 72.
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244. [WALSH, B. D.] [*Attacus polyphemus*, etc.] <Pract. Ent., March, 1867, v. 2, pp. 72-73.
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245. [WALSH, B. D.] [*Cossus robiniae*, etc.] <Pract. Ent., March, 1867, v. 2, p. 73.
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246. [WALSH, B. D.] [Museum pests.] <Pract. Ent., March, 1867, v. 2, p. 73.
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247. [WALSH, B. D.] [Katydid eggs.] <Pract. Ent., March, 1867, v. 2, p. 73.
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248. [WALSH, B. D.] [Squash-vine borer.] <Pract. Ent., March, 1867, v. 2, p. 73.
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249. [WALSH, B. D.] [Apple-twig borers, etc.] <Pract. Ent., March, 1867, v. 2, pp. 73-74.
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251. [WALSH, B. D.] [Tree-cricket.] <Pract. Ent., March, 1867, v. 2, p. 74.
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252. [WALSH, B. D.] [Tineids in bee-hives.] <Pract. Ent., March, 1867, v. 2, p. 74.
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253. W[ALSH], B. D. Jumping to conclusions. <Pract. Ent., March, 1867, v. 2, p. 74.
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258. [WALSH, B. D.] [Lice on horses.] <Pract. Ent., April, 1867, v. 2, p. 83.
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259. [WALSH, B. D.] [Cocoon on wild cherry.] <Pract. Ent., April, 1867, v. 2, p. 83.
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260. [WALSH, B. D.] [Lepidopterous case-bearer.] <Pract. Ent., April, 1867, v. 2, p. 83.
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264. [WALSH, B. D.] [Bark-lice.] <Pract. Ent., April, 1867, v. 2, p. 84.
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265. [WALSH, B. D.] [Plant-lice.] <Pract. Ent., April, 1867, v. 2, p. 84.
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266. [WALSH, B. D.] [Bag-worms.] <Pract. Ent., April, 1867, v. 2, pp. 84-85.
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267. [WALSH, B. D.] [Insects injurious to grape.] <Pract. Ent., April, 1867, v. 2, p. 85.
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268. [WALSH, B. D.] [*Attacus promethea*.] <Pract. Ent., April, 1867, v. 2, p. 85.
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270. [WALSH, B. D.] [Apple-tree plant-lice.] <Pract. Ent., April, 1867, v. 2, p. 85.
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271. [WALSH, B. D.] [Tulip-tree bark-louse: Basket-worm.] <Pract. Ent., April, 1867, v. 2, p. 85.

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Ravages, description, and figure of *Fidia viticida* n. sp.; modification of the clasping organs of insects.

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275. W[ALSH], B. D. None so blind as those who shut their eyes. <Pract. Ent., May, 1867, v. 2, pp. 89-90.

Criticism of error by editors of agricultural papers; rate of eastward progress of *Doryphora 10-lineata*.

276. W[ALSH], B. D. Self-taught entomologists. <Pract. Ent., May, 1867, v. 2, pp. 91-92.

Criticism of misstatements found in agricultural papers; first occurrence of *Doryphora 10-lineata* in Illinois in 1864.

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287. [WALSH, B. D.] [*Attacus ceoropia*.] <Pract. Ent., May, 1867, v. 2, p. 96.
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288. [WALSH, B. D.] [Twig pruners.] <Pract. Ent., May, 1867, v. 2, p. 96.
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289. [WALSH, B. D.] [Blister-beetles.] <Pract. Ent., May, 1867, v. 2, p. 97.
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290. [WALSH, B. D.] [Means against Curculio: *Æstridæ*.] <Pract. Ent., May, 1867, v. 2, p. 97.
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294. [WALSH, B. D.] [Gall-flies; saw-flies.] <Pract. Ent., June, 1867, v. 2, pp. 102-103.
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295. [WALSH, B. D.] [Bark-beetles.] <Pract. Ent., June, 1867, v. 2, p. 103.
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296. [WALSH, B. D.] [Apple-tree insects.] <Pract. Ent., June, 1867, v. 2, p. 103.
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297. [WALSH, B. D.] [*Attacus cecropia*.] <Pract. Ent., June, 1867, v. 2, p. 103.
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298. [WALSH, B. D.] [Grape-vine flea-beetle.] <Pract. Ent., June, 1867, v. 2, p. 103.
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299. [WALSH, B. D.] [*Sphyracephala brevicornis*.] <Pract. Ent., June, 1867, v. 2, p. 103.
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300. [WALSH, B. D.] [May-bug.] <Pract. Ent., June, 1867, v. 2, p. 103.
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301. [WALSH, B. D.] [Blister-beetles: plant-louse enemy.] <Pract. Ent., June, 1867, v. 2, p. 104.
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302. [WALSH, B. D.] [Blackberry borers.] <Pract. Ent., June, 1867, v. 2, p. 104.
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303. W[ALSH], B. D. Scientific nomenclature. <Pract. Ent., July, 1867, v. 2, pp. 105-106.
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304. W[ALSH], B. D. Currant plant-lice (*Aphis ribis*). <Pract. Ent., July, 1867, v. 2, p. 106.
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305. [WALSH, B. D.] [*Lucanus elaphus*.] <Pract. Ent., July, 1867, v. 2, p. 107.
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306. [WALSH, B. D.] [New York weevil.] <Pract. Ent., July, 1867, v. 2, p. 107.
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307. [WALSH, B. D.] [Codling-moth.] <Pract. Ent., July, 1867, v. 2, p. 107.
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308. [WALSH, B. D.] [Hickory borer, etc.] <Pract. Ent., July, 1867, v. 2, p. 107.
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309. [WALSH, B. D.] [Wasps.] <Pract. Ent., July, 1867, v. 2, p. 107.
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310. [WALSH, B. D.] [Parasitic flies, etc.] <Pract. Ent., July, 1867, v. 2, pp. 107-108.
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311. [WALSH, B. D.] [Workers among Hymenoptera.] <Pract. Ent., July, 1867, v. 2, p. 108.
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312. [WALSH, B. D.] [Cut-worms.] <Pract. Ent., July, 1867, v. 2, p. 108.
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314. [WALSH, B. D.] [Black-bug.] <Pract. Ent., July, 1867, v. 2, p. 108.
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315. [WALSH, B. D.] [Burying-beetles.] <Pract. Ent., July, 1867, v. 2, p. 108.
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316. [WALSH, B. D.] [Insects named.] <Pract. Ent., July, 1867, v. 2, p. 108.
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317. [WALSH, B. D.] [Spring-tails.] <Pract. Ent., July, 1867, v. 2, pp. 108-109.
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318. [WALSH, B. D.] [Blackberry gall insects.] <Pract. Ent., July, 1867, v. 2, p. 109.
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319. [WALSH, B. D.] [Pine and cedar longicorns.] <Pract. Ent., July, 1867, v. 2, p. 109.
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320. [WALSH, B. D.] [White-pine plant-louse, etc.] <Pract. Ent., July, 1867, v. 2, p. 109.
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321. [WALSH, B. D.] [Cut-worms.] <Pract. Ent., July, 1867, v. 2, p. 109.
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322. [WALSH, B. D.] [Currant plant-louse.] <Pract. Ent., July, 1867, v. 2, pp. 109, 110.
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323. [WALSH, B. D.] [Beetles.] <Pract. Ent., July, 1867, v. 2, p. 110.
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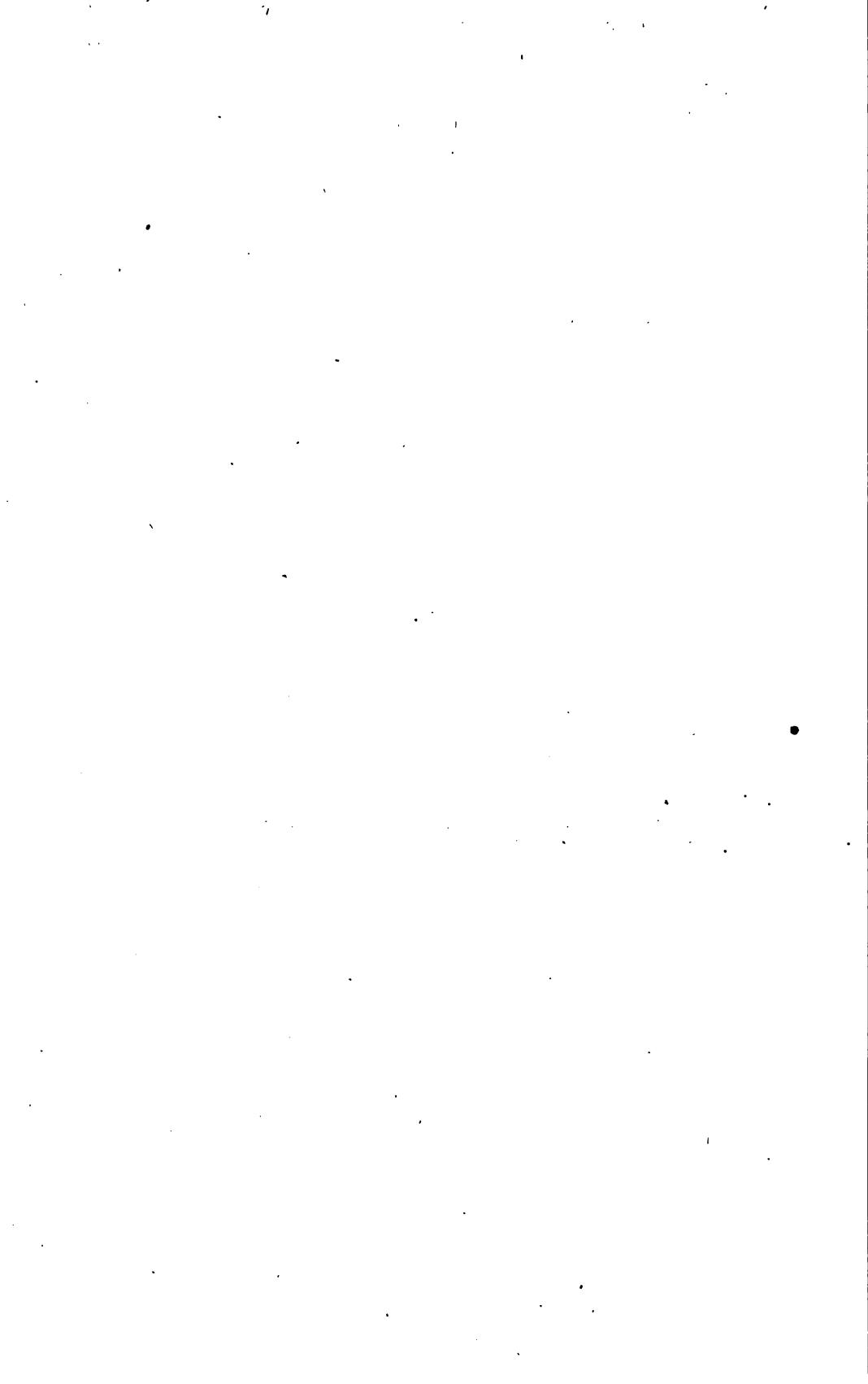
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U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF ENTOMOLOGY.

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THE MORE IMPORTANT CONTRIBUTIONS
TO
AMERICAN ECONOMIC ENTOMOLOGY.

PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,

BY

SAMUEL HENSHAW.

PART II.

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OF

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 Notice of W. H. Edwards's "The butterflies of North America," pt. 1; of A. S. Packard, jr.'s "Guide to the study of insects," pt. 2; and of the "Canadian Entomologist," v. 1, No. 1.
396. [WALSH, B. D., and C. V. RILEY.] "Fire-flies." <Amer. Ent., September, 1868, v. 1, p. 19, fig. 9.
 Answer to inquiry of W. McC.; characters and transformations of *Photinus pyralis*; figures larva, with details of structure, pupa, and imago.
397. [WALSH, B. D., and C. V. RILEY.] A new grape root-borer. <Amer. Ent., September, 1868, v. 1, p. 19.
 Answer to inquiry of W. D. F. Lummis; characters and ravages of an undetermined longicorn larva; food-habits of *Orthosoma cylindricum* [= *brunneum*].
398. [WALSH, B. D., and C. V. RILEY.] Bugs on grape-vines mistaken for chinch-bugs. <Amer. Ent., September, 1868, v. 1, p. 19.
 Answer to inquiry of F. Hecker; characters, ravages, and food-plants of *Blissus leucopterus* and of *Piesma cinerea*.
399. [WALSH, B. D., and C. V. RILEY.] Leaf-hoppers of the grape. <Amer. Ent., September, 1868, v. 1, p. 19.
 Answer to inquiry of F. Hecker; characters and ravages of *Proconia* [= *Onometopia*] *undata*.
400. [WALSH, B. D., and C. V. RILEY.] Leaf-bugs. <Amer. Ent., September, 1868, v. 1, p. 19.
 Answer to inquiry of C. H. Peck; food-habits of *Tingis* [= *Gargaphia*] *tiliae* and of *T.* [= *Corythuca*] *ciliata*; punctures on leaves caused by Hemiptera.
401. [WALSH, B. D., and C. V. RILEY.] Potato bugs. <Amer. Ent., 1868, v. 1, October, pp. 21-27, fig. 10-19; November, pp. 41-49, fig. 33-48.
 Failure of popular authors to distinguish between the different insects infesting the potato plant; brief accounts and figures of one or more stages of the following species: *Gortyna nitela*, *Baridius* [= *Trichobaris*] *trinitata*, *Sphinx 5-maculata* [= *Protoparce celeus*], *Lytta* [= *Epicauta*] *vittata*, *L. atrata* [= *E. pennsylvanica*], *L. marginata* [= *E. cinerea*], *L. cinerea* [= *Macrobasis unicolor*], *L. murina* [= *M. unicolor*], *Lema trilineata*, and *Haltica* [= *Crepidodera*] *cucumeris*; migrations, habits, enemies, and means against *Doryphora 10-lineata*; figures of all stages of *D. 10-lineata* and *D. juncta* and of numerous enemies of the former.
402. [WALSH, B. D., and C. V. RILEY.] "Grasshoppers." Their devastations in western Iowa and the good that has resulted from them. <Amer. Ent., October, 1868, v. 1, pp. 27-28.
 Letter of M. C. Nickerson, with comments; seeds of *Vilfa virginiflora* carried by "grasshoppers."

403. [WALSH, B. D., and C. V. RILEY.] An apple growing on a grape-vine. <Amer. Ent., October, 1868, v. 1, p. 28.
Extract from *Richmond (Va.) Whig*, with criticism; a gall of *Cecidomyia ritispomum* mistaken for an apple growing on a grape-vine. See Nos. 332, 436, 478.
404. [WALSH, B. D., and C. V. RILEY.] Ticks and Texas fever.
<Amer. Ent., October, 1868, v. 1, p. 28.
Improbability that *Ixodes bovis* is the cause of the Texas fever of cattle.
405. [WALSH, B. D., and C. V. RILEY.] Scientific symbols. <Amer. Ent., October, 1868, v. 1, p. 28. Reprint: <Op. cit., November, 1869, v. 2, p. 50.
Explanation of the use of the signs designating the sexes.
406. [WALSH, B. D., and C. V. RILEY.] A swarm of butterflies.
<Amer. Ent., October, 1868, v. 1, pp. 28-29, figs. 20-22.
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407. [WALSH, B. D., and C. V. RILEY.] The sting of the 17-year Cicada. <Amer. Ent., October, 1868, v. 1, pp. 36-37.
Communications from F. W. Collins, R. Richardson, and B. Borden, on the reputed sting of Cicada [= *Tibicen*] *septendecim* and on the habits of *Stizus grandis* [= *Sphæcius speciosus*].
408. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., October, 1868, v. 1, p. 37.
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409. [WALSH, B. D., and C. V. RILEY.] Squash-bug; its change of color. <Amer. Ent., October, 1868, v. 1, p. 37.
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410. [WALSH, B. D., and C. V. RILEY.] White grub; immunity from it next year in Clinton County, Mo. <Amer. Ent., October, 1868, v. 1, p. 37.
Answer to inquiry of J. P. McCartney; life-habits of *Lachnosterna fusca*.
411. [WALSH, B. D., and C. V. RILEY.] Insect enemies of the Colorado potato beetle. <Amer. Ent., October, 1868, v. 1, p. 37.
Answer to inquiry of S. H. Kriedelbaugh; identification of three insect enemies of *Doryphora 10-lineata*.
412. [WALSH, B. D., and C. V. RILEY.] "Harvest-bugs" in America, misnamed "jiggers." <Amer. Ent., October, 1868, v. 1, p. 38.
Answer to inquiry of M. McKenzie; habits of parasitic *Acarina*; distribution of and injuries caused by *Sarcophylla penetrans*.
413. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., October, 1868, v. 1, p. 38.
Answer to inquiry of J. T. Smith; food-plants of *Aphis mali* and of *Noto-donta* [= *Edemasia*] *concinna*; *Campoplex* [= *Limperia*] *fugitiva* parasitic on larva of *Euchætes egle*.
414. [WALSH, B. D., and C. V. RILEY.] Grapes cut off by the tree cricket. <Amer. Ent., October, 1868, v. 1, p. 38, fig. 30-31.
Answer to inquiry of J. H. Tice; food-habits of *Æcanthus niveus*; deposition of eggs; figures both sexes.

415. [WALSH, B. D., and C. V. RILEY.] The Buffalo tree-hopper.
 <Amer. Ent., October, 1868, v. 1, p. 38.
 Answer to inquiry of P. Rickert; characters, habits, and means against *Ceresa bubalus*.
416. [WALSH, B. D., and C. V. RILEY.] A scavenger mistaken for a foe. <Amer. Ent., October, 1868, v. 1, p. 38.
 Answer to inquiry of Simmons and Tillson; characters and habits of the larva of *Copris carolina*.
417. [WALSH, B. D., and C. V. RILEY.] Insect foes of the bark-louse.
 <Amer. Ent., October, 1868, v. 1, p. 39, fig. 32.
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418. [WALSH, B. D., and C. V. RILEY.] Best works on entomology.
 <Amer. Ent., October, 1868, v. 1, p. 39.
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419. [WALSH, B. D., and C. V. RILEY.] Larvæ in plum-gum. <Amer. Ent., October, 1868, v. 1, p. 39.
 Answer to inquiry of P. Rickert; unknown larva (probably dipterous) found in gum of plum tree; *Mycetophila* sp., bred from gum of peach-tree.
420. [WALSH, B. D., and C. V. RILEY.] Insect foes of the hop vine.
 <Amer. Ent., October, 1868, v. 1, p. 39.
 Answer to inquiry of H. C. Freeman; characters and habits of larva of *Saturnia* [= *Hyperchiria*] *io* and of *Vanessa* [= *Grapta*] *interrogationis*.
421. [WALSH, B. D., and C. V. RILEY.] Insect foe of the apple-tree borer. <Amer. Ent., October, 1868, v. 1, p. 39.
 Answer to inquiry of J. E. Walker; undetermined carabid larva preying upon larva of *Saperda candida*.
422. [WALSH, B. D., and C. V. RILEY.] Oak tree caterpillars. <Amer. Ent., October, 1868, v. 1, p. 39.
 Answer to inquiry of W. W. Daniells; characters and habits of larva of *Edema albifrons*.
423. [WALSH, B. D., and C. V. RILEY.] Bark-lice on apple trees.
 <Amer. Ent., October, 1868, v. 1, p. 40.
 Answer to inquiry of J. G. Fleck; *Mytilaspis pomorum* destroyed by a minute mite.
424. [WALSH, B. D., and C. V. RILEY.] The "saddle-back" caterpillar. <Amer. Ent., October, 1868, v. 1, p. 40.
 Answer to inquiries of E. Baxter and O. A. Kenyon; characters, habits, and urticating properties of the larva of *Empretia stimulea*.
425. [WALSH, B. D., and C. V. RILEY.] The regal walnut caterpillar.
 <Amer. Ent., October, 1868, v. 1, p. 40.
 Answer to inquiry of M. Copley; characters and food-plants of larva of *Citheronia regalis*; times of metamorphosis; characters of the imago.
426. [WALSH, B. D., and C. V. RILEY.] The Hessian fly. <Amer. Ent., October, 1868, v. 1, p. 40.
 Answer to inquiry of F. D. Carson; ravages of *Cecidomyia destructor*; late sowing as a means of avoiding the same.

427. [WALSH, B. D., and C. V. RILEY.] Red cedar caterpillar. <Amer. Ent., October, 1868, v. 1, p. 40.
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428. [WALSH, B. D., and C. V. RILEY.] Wheat-midge winter killed. <Amer. Ent., October, 1868, v. 1, p. 40.
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429. [WALSH, B. D., and C. V. RILEY.] Grape-vine borer. <Amer. Ent., October, 1868, v. 1, p. 40.
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430. [WALSH, B. D., and C. V. RILEY.] Popular names and scientific names. <Amer. Ent., November, 1868, v. 1, p. 49, figs. 49-51.
Indefiniteness of popular names; figures *Julus* sp., and the larva and imago of one of the *Elaterida*.
431. [WALSH, B. D., and C. V. RILEY.] Entomological ignorance in the North. <Amer. Ent., November, 1868, v. 1, pp. 50-51, figs. 52-54.
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432. [WALSH, B. D., and C. V. RILEY.] Tit for tat. <Amer. Ent., November, 1868, v. 1, p. 52.
Ridicule of an absurd entomological item.
433. [WALSH, B. D., and C. V. RILEY.] Grasshoppers. <Amer. Ent., November, 1868, v. 1, p. 53.
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434. [WALSH, B. D., and C. V. RILEY.] To keep seed peas from bugs. <Amer. Ent., November, 1868, v. 1, p. 53.
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435. [WALSH, B. D., and C. V. RILEY.] Mind how you pack insects. <Amer. Ent., November, 1868, v. 1, p. 54.
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436. [WALSH, B. D., and C. V. RILEY.] The apple growing on a grape vine. <Amer. Ent., November, 1868, v. 1, p. 54.
The "vegetable phenomenon," see Nos. 332, 403, 478, proved to be a gall.
437. [WALSH, B. D., and C. V. RILEY.] The late exhibition of useful and destructive insects at Paris. <Amer. Ent., November, 1868, v. 1, p. 55.
Notice of the formation of the Société d'Insectologie Agricole at Paris, and of the second exhibition of the society.
438. [WALSH, B. D., and C. V. RILEY.] Destroying black ants in gardens. <Amer. Ent., November, 1868, v. 1, p. 55.
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439. [WALSH, B. D., and C. V. RILEY.] Entomological quackery. <Amer. Ent., November, 1868, v. 1, p. 56.
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440. [WALSH, B. D., and C. V. RILEY.] The cruel bug-hunters. <Amer. Ent., November, 1868, v. 1, p. 56.
Insects are not susceptible of such feelings of pain and pleasure as are felt by higher animals.
441. [WALSH, B. D., and C. V. RILEY.] Honey bees eating grapes. <Amer. Ent., November, 1868, v. 1, p. 56.
Reprint of a letter by T. W., from Ohio Farmer, with comments; *Apis mellifica* as an enemy of sound fruit.
442. [WALSH, B. D., and C. V. RILEY.] Twigs amputated by some unknown animal. <Amer. Ent., November, 1868, v. 1, p. 57.
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443. [WALSH, B. D., and C. V. RILEY.] Twigs girdled by some animal. <Amer. Ent., November, 1868, v. 1, p. 57.
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444. [WALSH, B. D., and C. V. RILEY.] Hop-vine caterpillar. <Amer. Ent., November, 1868, v. 1, p. 57.
Answer to inquiry of H. J. Dunlap; larva of *Grapta interrogationis* feeding on hop-vines.
445. [WALSH, B. D., and C. V. RILEY.] "Galls" on leaves of soft maple. <Amer. Ent., November, 1868, v. 1, p. 57.
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446. [WALSH, B. D., and C. V. RILEY.] Unsightly galls on the cottonwood. <Amer. Ent., November, 1868, v. 1, p. 57.
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447. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1868, v. 1, p. 57.
Answer to inquiry of E. Baxter; *Gordius aquaticus* a host in *Orcelimum gracile*; *Cetonia* [= *Euphoria*] *inda* destructive to the peach.
448. [WALSH, B. D., and C. V. RILEY.] The stick-bug. <Amer. Ent., November, 1868, v. 1, p. 58. Reprint: <Can. Farmer, 15 January, 1870.
Description, vernacular names, and habits of *Spectrum* [= *Diapheromera*] *femorata*.
449. [WALSH, B. D., and C. V. RILEY.] Woolly lice on the beech. <Amer. Ent., November, 1868, v. 1, p. 58.
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450. [WALSH, B. D., and C. V. RILEY.] The sheep-bot or head-maggot.
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 Answer to inquiry of R. W. Scott; *Estrus ovis* ordinarily oviparous; sometimes the eggs hatch prematurely inside the body.
451. [WALSH, B. D., and C. V. RILEY.] Leaf-miners of the locust.
 <Amer. Ent., November, 1868, v. 1, p. 58.
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452. [WALSH, B. D., and C. V. RILEY.] Leaf-hoppers on celery.
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453. [WALSH, B. D., and C. V. RILEY.] Parsnip caterpillars.—Scorpions.
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 Answer to inquiry of F. Brewer; food-plants of larva of *Papilio asterias*; habits of the imago; habits and sting of *Buthus carolinianus*; its occurrence in Missouri.
454. [WALSH, B. D., and C. V. RILEY.] Noxious insects named.
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 Answer to inquiry of J. H. Parsons; larval characters and food-plants of *Hyphantria textor* [= *cunea*], *Notodonta* [= *Edemasia*] *concinna*, *Arctia* [= *Spilosoma*] *virginica*, *Carpocapsa pomonella*, and of *Trypeta pomonella*.
455. [WALSH, B. D., and C. V. RILEY.] Cut-worms destroying recently sown wheat. <Amer. Ent., November, 1868, v. 1, p. 59.
 Answer to inquiry of T. R. Allen; characters, habits, and means against undetermined *Noctuidæ* attacking wheat.
456. [WALSH, B. D., and C. V. RILEY.] The spined soldier bug.
 <Amer. Ent., November, 1868, v. 1, p. 59.
 Answer to inquiry of I. Hicks; *Podisus spinosus* as an enemy of *Hyphantria textor* [= *cunea*].
457. [WALSH, B. D., and C. V. RILEY.] The preying Mantis, alias Devil's riding horse, etc. <Amer. Ent., November, 1868, v. 1, p. 59.
 Answer to inquiry of A. Pettit; habits of *Mantis* [= *Phasmomantis*] *carolina*; egg-mass of the same.
458. [WALSH, B. D., and C. V. RILEY.] The pigeon Tremex. <Amer. Ent., November, 1868, v. 1, p. 59.
 Answer to inquiry of F. Brewer; characters of *Tremex columba*; food-habits and parasites of its larva.
459. [WALSH, B. D., and C. V. RILEY.] Flesh-worms. <Amer. Ent., November, 1868, v. 1, p. 59.
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460. [WALSH, B. D., and C. V. RILEY.] Fall web-worm on hickory.
 <Amer. Ent., November, 1868, v. 1, p. 59.
 Answer to inquiry of W. W. Daniels; transformation of *Hyphantria textor* [= *cunea*]; characters of its larva and imago.

461. [WALSH, B. D., and C. V. RILEY.] Butterflies named. <Amer. Ent., November, 1868, v. 1, p. 60.
Answer to inquiry of W. W. Butterfield; characters of *Collas philodice*, *Vanessa* [= *Grapta*] *comma*, and *Danaïs archippus*.
462. [WALSH, B. D., and C. V. RILEY.] Museum pest. <Amer. Ent., November, 1868, v. 1, p. 60.
Answer to inquiry of T. W. Holt, jr.; means against *Dermestidae*.
463. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1868, v. 1, p. 60.
Answer to inquiry of J. Weed; enemies of plant-lice and bark-lice; food-plant and characters of the larva of *Papilio turnus*.
464. [WALSH, B. D., and C. V. RILEY.] Grapes spoiled by something. <Amer. Ent., November, 1868, v. 1, p. 60.
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465. [WALSH, B. D., and C. V. RILEY.] White-pine worms. <Amer. Ent., November, 1868, v. 1, p. 60.
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466. [WALSH, B. D., and C. V. RILEY.] The Tarantula of Texas. <Amer. Ent., November, 1868, v. 1, p. 60.
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467. [WALSH, B. D., and C. V. RILEY.] Insect foes of the apple-tree. <Amer. Ent., November, 1868, v. 1, p. 60.
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468. [WALSH, B. D., and C. V. RILEY.] Grape-leaf folders eaten by spiders. <Amer. Ent., November, 1868, v. 1, p. 60.
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469. [WALSH, B. D., and C. V. RILEY.] Caterpillar of the Troilus butterfly. <Amer. Ent., November, 1868, v. 1, p. 60.
Answer to inquiry of A. S. Fuller; food-habits of larva of *Papilio troilus*.
470. [WALSH, B. D., and C. V. RILEY.] Potato beetles. <Amer. Ent., November, 1868, v. 1, p. 60.
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471. [WALSH, B. D., and C. V. RILEY.] Holes round the roots of young ash trees in the nursery. <Amer. Ent., November, 1868, v. 1, p. 60.
Answer to inquiry of I. Hicks; characters and food-habits of the larva of *Xyloryctes satyrus*.
472. [WALSH, B. D., and C. V. RILEY.] Locust borers. <Amer. Ent., November, 1868, v. 1, p. 60.
Answer to inquiry of U. Bruner; destructiveness of the larva of *Clytus* [= *Cyllene*] *robiniae*.

473. [WALSH, B. D., and C. V. RILEY.] The hellgrammite fly. <Amer. Ent., December, 1868, v. 1, pp. 61-62, figs. 56-57.
Habits of *Corydalis cornutus*; figures the larva, pupa, and imago; description and figure of the eggs of *Belostomat americanum* mistaken for those of *Corydalis*.
474. [WALSH, B. D., and C. V. RILEY.] The periodical Cicada. <Amer. Ent., December, 1868, v. 1, pp. 63-72, figs. 58-64. Extract: <Op. cit., June, 1869, v. 1, p. 202.
Characterization of the 13-year brood of Cicada as a new species, *C. [= Tibicen] tredecim*; dimorphism of the same and of *C. [= T.] septendecim*; seasons, natural history, transformations, enemies, sting, and injuries of these species; chronological history of their several known broods; figures the several stages of *C. [= T.] septendecim*, the towers made by the pupa and twigs with eggs.
475. [WALSH, B. D., and C. V. RILEY.] The hateful or Colorado grasshopper, *Caloptenus spretus*, Uhler and Walsh. <Amer. Ent., December, 1868, v. 1, pp. 73-76, fig. 65.
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476. [WALSH, B. D., and C. V. RILEY.] The twig-girdler, *Oncideres cingulatus*, Say. <Amer. Ent., December, 1868, v. 1, pp. 76-77, fig. 66.
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477. [WALSH, B. D., and C. V. RILEY.] An Ichneumon fly mistaken for a wasp. <Amer. Ent., December, 1868, v. 1, p. 77.
Review of paper in *Christian Advocate* on "The stiletto wasp"; *Pimpla [= Thalesa] atrata* probably mistaken for a wasp.
478. [WALSH, B. D., and C. V. RILEY.] A plant growing out of an insect. <Amer. Ent., December, 1868, v. 1, p. 77.
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479. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., December, 1868, v. 1, p. 78.
Notices of The butterflies of North America by W. H. Edwards.—The Canadian Entomologist.—Guide to the study of insects by A. S. Packard, jr.
480. [WALSH, B. D., and C. V. RILEY.] Eggs of the white-marked tussock moth. <Amer. Ent., December, 1868, v. 1, p. 79, fig. 67.
Answer to inquiry of J. M. Hannah; characters of egg and larva of *Orgyia leucostigma*; sexual differences; parasites; figure of the larva.
481. [WALSH, B. D., and C. V. RILEY.] Currant borers. <Amer. Ent., December, 1868, v. 1, p. 79.
Answer to inquiry of B. N. McKinstry; means against *Trochilium [= Egertia] tipuliformis*, *T. [= Alcaetha] caudatum*, and *Psenocerus supernotatus*.

482. [WALSH, B. D., and C. V. RILEY.] Insect infesting grape seed.
 <Amer. Ent., December, 1868, v. 1, p. 79, fig. 68.
 Answer to inquiry of A. S. Fuller; characters and figure of larva of *Isosoma vitis* infesting grape seed.
483. [WALSH, B. D., and C. V. RILEY.] Museum pests again. <Amer. Ent., December, 1868, v. 1, p. 79.
 Answer to inquiry of J. Huggins; means against *Anthreni* in collections of natural history.
484. [WALSH, B. D., and C. V. RILEY.] Grape-vine leaf-hoppers.
 <Amer. Ent., December, 1868, v. 1, p. 79.
 Answer to inquiry of P. C. Holmes; means against grape-vine leaf-hoppers.
485. [WALSH, B. D., and C. V. RILEY.] Apple-tree borer. <Amer. Ent., December, 1868, v. 1, p. 80, fig. 69.
 Answer to inquiries of J. T. Zimmerman, C. H. Roberts, and C. R. Babbitt; habits, ravages, and figure of *Bostrychus* [= *Amphicerus*] *bicaudatus*.
486. [WALSH, B. D., and C. V. RILEY.] The murky ground beetle.
 <Amer. Ent., December, 1868, v. 1, p. 80.
 Answer to inquiry of E. T. Dale; food-habits and bombardier discharges of *Harpalus caliginosus*.
487. [WALSH, B. D., and C. V. RILEY.] Curculio and bark-lice.
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488. [WALSH, B. D., and C. V. RILEY.] Insects to be named. <Amer. Ent., December, 1868, v. 1, p. 80.
 Answer to inquiry of E. B. Beach; identification of several lepidopterous larvæ; food-habits of *Dryocampa stigma* and *D. pellucida* [= *virginiensis*].
489. [WALSH, B. D., and C. V. RILEY.] Young pecan trees girdled.
 <Amer. Ent., December, 1868, v. 1, p. 80.
 Answer to inquiry of Mann and Redmond; means against *Oncideres cingulata*.
490. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., December, 1868, v. 1, p. 80.
 Answer to inquiry of E. T. Dale; identification of several Coleoptera; supposed food-habits of *Tragidion fulvipenne*; character of cocoons of two species of *Microgaster* infesting *Protoparce celeus*.
491. [WALSH, B. D., and C. V. RILEY.] Eggs of true bugs. <Amer. Ent., December, 1868, v. 1, p. 80.
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492. [WALSH, B. D., and C. V. RILEY.] Museum pest once more.
 <Amer. Ent., December, 1868, v. 1, p. 80.
 Answer to inquiry of G. M. L.; larvæ of *Anthrenus musæorum* injuring whale-bone, woolen goods, etc.
493. [WALSH, B. D., and C. V. RILEY.] The Tarantula of Texas again.
 <Amer. Ent., December, 1868, v. 1, p. 80.
 Answer to inquiry of C. Peabody; distribution of *Mygale kentzii* in Missouri.

494. [WALSH, B. D., and C. V. RILEY.] The Hessian fly on seed wheat. <Amer. Ent., December, 1868, v. 1, p. 80.
Answer to inquiry of U. Scott; broods and times of transformation of *Cecidomyia destructor*.
495. [WALSH, B. D., and C. V. RILEY.] The apple-root plant-louse. *Eriosoma (Pemphigus) pyri*, Fitch. <Amer. Ent., January, 1869, v. 1, pp. 81-84, figs. 70-72.
Habits, ravages, description, enemies, and parasites of, and means against *Eriosoma pyri* [= *Schizoneura lanigera*]; figures injured root, larva, and adult with details of structure; figures adult plant-louse found on cottonwood; description and figure of larva, puparium, and imago of *Pipiza radicum* n. sp.
496. [WALSH, B. D., and C. V. RILEY.] Ants' nests in gardens. <Amer. Ent., January, 1869, v. 1, p. 84.
Means against ants.
497. [WALSH, B. D., and C. V. RILEY.] The parasites of the human animal. <Amer. Ent., January, 1869, v. 1, pp. 84-88, figs. 73-74.
Brief accounts of *Pediculus humanus* [= *vestimenti*], *P. cervicalis* [= *capitis*], *P.* [= *Pthirus*] *pubis*, *Æstrus* [= *Dermatobia*] *hominis*, *Pulex irritans*, *P.* [= *Sarcophylla*] *penetrans*, *Acanthia lectularia*, *Conorhinus sanguisuga*, and *Acorus* [= *Sarcoptes*] *scabiei*; figures and habits of *Reduvius* [= *Opsicæus*] *personatus* and of *Pirates* [= *Rasahus*] *biguttatus*; figure of *Conorhinus sanguisuga*; classificatory relations of *Pediculina* and *Mallophaga*.
498. [WALSH, B. D., and C. V. RILEY.] The coffee borer. <Amer. Ent., January, 1869, v. 1, p. 88.
Unnamed coffee borer injurious to coffee trees in Madras.
499. [WALSH, B. D., and C. V. RILEY.] Strawberry worms. <Amer. Ent., January, 1869, v. 1, pp. 89-91, figs. 75-76.
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500. [WALSH, B. D., and C. V. RILEY.] Fungoid growths. <Amer. Ent., January, 1869, v. 1, pp. 91-92.
Mention of instances of the growth of fungi on living plants and animals; letter of S. H. Y. Early on the occurrence of fungoid growths on the larvæ of *Lachnostrerna fucæ*.
501. [WALSH, B. D., and C. V. RILEY.] Plums for the million. <Amer. Ent., January, 1869, v. 1, pp. 92-93.
Means against *Conotrachelus nenuphar*; notes on varieties of plum exempt from the attacks of the same.
502. [WALSH, B. D., and C. V. RILEY.] The "Colorado grasshopper." <Amer. Ent., January, 1869, v. 1, pp. 95-96.
Answer to inquiries of W. N. Byers and V. Devinny; specific names indicating particular districts can not be changed because the insect is found in other regions.

503. [WALSH, B. D., and C. V. RILEY.] Universal remedies. <Amer. Ent., January, 1869, v. 1, p. 97.
Criticism of an advertisement of "Best's patent fruit tree and vine invigorator."
504. [WALSH, B. D., and C. V. RILEY.] Complimentary. <Amer. Ent., January, 1869, v. 1, p. 98.
Notices of several notices of the American Entomologist.
505. [WALSH, B. D., and C. V. RILEY.] Paper-makers. <Amer. Ent., January, 1869, v. 1, p. 98.
Comparison of the manufacture of paper by man and by the *Vespida*.
506. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., January, 1869, v. 1, p. 98.
Notices of L'Insectologie agricole—Cecil's books of natural history.
507. [WALSH, B. D., and C. V. RILEY.] Look out for the eggs of the apple-tree plant-louse. <Amer. Ent., January, 1869, v. 1, p. 99.
Abundance of eggs of *Aphis mali* in winter of 1868-'69, in Missouri and Illinois; means against the same.
508. [WALSH, B. D., and C. V. RILEY.] Greenhouse plants [= pests]. <Amer. Ent., January, 1869, v. 1, p. 99.
Means against *Aphididae*, *Coccidae*, and *Tetranychus telarius*.
509. [WALSH, B. D., and C. V. RILEY.] How to hatch pupæ. <Amer. Ent., January, 1869, v. 1, p. 99.
Answer to inquiry of D. P. Smith; methods of raising insects.
510. [WALSH, B. D., and C. V. RILEY.] Drug-store pests. <Amer. Ent., January, 1869, v. 1, p. 99.
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511. [WALSH, B. D., and C. V. RILEY.] Apple-tree worms. <Amer. Ent., January, 1869, v. 1, p. 99.
Answer to inquiry of J. J. Thomas; habits, food-plants, and means against *Phycita nebulo* [= *Acrobasis indigitella*].
512. [WALSH, B. D., and C. V. RILEY.] Crane-fly larvæ. Amer. Ent., January, 1869, v. 1, p. 100.
Answer to inquiries of R. D. Alexander and — Hickman; habits of *Tipula* sp.; food-habits of *T. trivittata*.
513. [WALSH, B. D., and C. V. RILEY.] Punctured grape canes. <Amer. Ent., January, 1869, v. 1, p. 100.
Answer to inquiry of B. L. Kingsbury; description of punctures in grape canes probably caused by *Orocharis saltator*; means against tree-crickets.
514. [WALSH, B. D., and C. V. RILEY.] Insects to be named. <Amer. Ent., January, 1869, v. 1, p. 100.
Answer to inquiry of W. R. Marine; identification of several insects found in apple and peach nurseries.
515. [WALSH, B. D., and C. V. RILEY.] Supposed cause of yellows in peach trees. <Amer. Ent., January, 1869, v. 1, p. 100, fig. 77.
Answer to inquiry of C. H. Roberts; yellows of peach-trees a vegetable disease; figure of healthy and diseased limb; affected trees more subject to the attacks of insects than healthy trees.

516. [WALSH, B. D., and O. V. RILEY.] Eggs of katydid. <Amer. Ent., January, 1869, v. 1, p. 100.
Answer to inquiry of A. A. Hilliard; character of the eggs of *Platyphyllum* [= *Cyrtophyllus*] *convexus*.
517. [WALSH, B. D., and O. V. RILEY.] Apple-twig borer. <Amer. Ent., January, 1869, v. 1, p. 100.
Answer to inquiry of J. T. Zimmerman; ravages of *Bostrichus* [= *Amphicerus*] *bicaudatus*.
518. [WALSH, B. D., and O. V. RILEY.] Galls and their architects. <Amer. Ent., February, 1869, v. 1, pp. 101-110, figs. 78-90.
Definition, classification, and variation of galls; accounts of some galls made by *Cynipidæ*, *Cecidomyidæ*, and *Aphididæ* and of the gall-makers; natural history, descriptions, and figures of *Cynips* [= *Amphibolips*] *q.-spongifica*, *C.* [= *A.*] *q.-inantis*, *C.* [= *A.*] *q.-prunus* n. sp., *Cecidomyia s.-strobiloides*, *C. s.-brassicoides*, *C. v.-pomum* n. sp., *C. v.-coryloides* n. sp., *Pemphigus vagabundus*, *P. rhois* and *Colopha ulmicola*; description of the imago of *Cynips q.-prunus* and of *Pemphigus ulmifusus* n. sp., and of the larvæ of the new species of *Cecidomyia*; dimorphism of gall-makers; presence of inquilines and parasites in galls. (See No. 821.)
519. [WALSH, B. D., and C. V. RILEY.] The bogus Colorado potato-bug, *Doryphora juncta*, Germar. <Amer. Ent., February, 1869, v. 1, p. 110.
Food-habits of *D. juncta*.
520. [WALSH, B. D., and C. V. RILEY.] Ants and aphides. <Amer. Ent., February, 1869, v. 1, p. 110.
Inquiry of W. Batchelor, with answer; secretion of honey-dew by *Aphididæ* and harvesting of the same by ants.
521. [WALSH, B. D., and C. V. RILEY.] The Tarantula of Texas, *Mygale hentzii*, Girard. <Amer. Ent., February, 1869, v. 1, p. 11, fig. 91.
Figure of *Mygale hentzii*; habits of *Pompilus* [= *Pepsis*] *formosa*; quotes from G. Lincecum's "The Tarantula killers of Texas" (Amer. Nat., v. 1, pp. 137-141).
522. [WALSH, B. D., and C. V. RILEY.] The melancholy chafer. <Amer. Ent., February, 1869, v. 1, p. 111.
Ravages and figure of the imago of *Euphoria melancholica*.
523. [WALSH, B. D., and C. V. RILEY.] Apple worms (*Carpocapsa pomonella*, Linn.). <Amer. Ent., February, 1869, v. 1, pp. 112-114, fig. 93.
Natural history, ravages, and means against *Carpocapsa pomonella*; figures injured apple, larva, pupa, and imago.
524. [WALSH, B. D., and C. V. RILEY.] The asparagus beetle (*Crioceris asparagi*, Linn.). <Amer. Ent., February, 1869, v. 1, pp. 114-115, fig. 94.
Introduction into the United States; natural history, ravages, parasites of, and means against *Crioceris asparagi*; figure of eggs, larvæ, and imago of the same.

525. [WALSH, B. D., and C. V. RILEY.] A popular delusion. <Amer. Ent., February, 1869, v. 1, p. 116.
No insect passes through all the stages of its growth within one day; life history of *Ephemeridæ*.
526. [WALSH, B. D., and C. V. RILEY.] The squirrel bot. <Amer. Ent., February, 1869, v. 1, p. 117.
Comments on paper by S. S. Rathvon; emasculation of the striped squirrel by *Cuterebra buccata*.
527. [WALSH, B. D., and C. V. RILEY.] [Periodical Cicada.] <Amer. Ent., February, 1869, v. 1, p. 117.
Comments on letter of R. H. Warder; oviposition of *Cicada* [= *Tibicen*] *septendecim* in evergreens.
528. [WALSH, B. D., and C. V. RILEY.] Transformations of insects. <Amer. Ent., February, 1869, v. 1, p. 118.
Brief statement of the stages of growth of insects.
529. [WALSH, B. D., and C. V. RILEY.] Do bees injure raspberries? <Amer. Ent., February, 1869, v. 1, p. 118.
Comments on discussion before New York Fruit Growers' Club as to the effects of bees on flowers and fruits.
530. [WALSH, B. D., and C. V. RILEY.] Best's fruit-tree invigorator again. <Amer. Ent., February, 1869, v. 1, p. 119.
Notice of invention of a new "invigorator" by B. Best.
531. [WALSH, B. D., and C. V. RILEY.] The insect extinguisher, by Joseph Treat, N. J. <Amer. Ent., February, 1869, v. 1, p. 119.
Critical review of pamphlet by J. Treat.
532. [WALSH, B. D., and C. V. RILEY.] More good words. <Amer. Ent., February, 1869, v. 1, p. 119.
Notice of favorable notices of the American Entomologist.
533. [WALSH, B. D., and C. V. RILEY.] Lacewing fly. <Amer. Ent., February, 1869, v. 1, p. 119.
Answer to inquiry of J. Huggins; characters of *Chrysopa* sp.; its hibernation as a pupa and imago.
534. [WALSH, B. D., and C. V. RILEY.] Gigantic water-bug. <Amer. Ent., February, 1869, v. 1, p. 119.
Answer to inquiry of S. E. Munford; food-habits of *Belostomatia grandis* [= *americanum*].
535. [WALSH, B. D., and C. V. RILEY.] The white-marked tussock moth again. <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of A. S. Fuller; mention of seven parasites attacking *Orgyia leucostigma*.
536. [WALSH, B. D., and C. V. RILEY.] Grasshopper eggs—will they hatch? <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of C. J. Jones; frosts not likely to prevent the hatching of the eggs of *Caloptenus spretus*.
537. [WALSH, B. D., and C. V. RILEY.] Injured apple-trees. <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of G. C. Broadhead; means against *Chrysobothris femorata*.

538. [WALSH, B. D., and C. V. RILEY.] Bag worms. <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of W. W. Butterfield; means against *Thyridopteryx ephemeraformis*.
539. [WALSH, B. D., and C. V. RILEY.] Eggs of the apple-tree plant-louse. <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of M. W. Seaman; effect of frosts upon the eggs and larvæ of *Aphis mali*.
540. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of J. B. Merwin; identification of insects sent; characters of *Vanessa antiopa* and *Cynthia* [= *Pyrameis*] *atalanta*.
541. [WALSH, B. D., and C. V. RILEY.] White grubs. <Amer. Ent., February, 1869, v. 1, p. 120.
Answer to inquiry of W. C. Holmes; undetermined white-grub injuring grass and osage orange.
542. [WALSH, B. D., and C. V. RILEY.] The polyphemus moth, *Attacus polyphemus*, Linn. <Amer. Ent., March, 1869, v. 1, pp. 121-122, fig. 95.
Attacus [= *Telea*] *polyphemus*, *A. cynthia*, and *Bombyx* [= *Sericaria*] *mori* as silk-producers; food-plants, description of larva, habits, and seasons of *A.* [= *T.*] *polyphemus*; figure of the imago; ravages of *A. cecropia*; antennæ mistaken for wings; mention of Lepidoptera having fissured wings.
543. [WALSH, B. D., and C. V. RILEY.] Wasps and their habits. <Amer. Ent., March, 1869, v. 1, pp. 122-143, figs. 96-112.
Structure, classification, and habits of North American predatory Hymenoptera; comparative characters of the digger and true wasps; figure to show the folding of the wing in true wasps; habits and figures of imagos of *Chlorion ceruleum*, *Bembex fasciata*, *Sphex ichneumonea*, *Ammophila pictipennis*, *Pepsia formosa*, *Stizus grandis* [= *Sphecius speciosus*], *S.* [= *S.*] *speciosus*, *Pelopæus lunatus* [= *cementarius*], *Agonia bombycina*, *Trypoxylon albittaræ*, *Ceropales rufiventris*, *Eumenes fraternus*, *Vepea maculata*, and *Polistes rubiginosus*; figure of imago of *Cryptus* [= *Linoceras*] *juncus* and of several nests of wasps. (See No. 375.)
544. [WALSH, B. D., and C. V. RILEY.] Do toads eat worker bees? <Amer. Ent., March, 1869, v. 1, p. 144.
Reprint and review of article by C. Dadant, and of comments of editors of American Bee Journal; usefulness of toads.
545. [WALSH, B. D., and C. V. RILEY.] Best's invigorator once again. <Amer. Ent., March, 1869, v. 1, p. 145.
Condemnation of B. Best's patent fruit tree and vine invigorator.
546. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., March, 1869, v. 1, p. 146.
Notices of Nos. 1 and 2 of *Le Naturaliste Canadien*.
547. [WALSH, B. D., and C. V. RILEY.] Sugar-tree borer. <Amer. Ent., March, 1869, v. 1, p. 146.
Answer to inquiry of E. Simms; characters and means against *Arhopalus* [= *Plagionotus*] *speciosus*.

548. [WALSH, B. D., and C. V. RILEY.] Swellings on apple scions. <Amer. Ent., March, 1869, v. 1, p. 146.
Answer to inquiry of W. Colwell; dipterous galls on apple scions and bass-wood twigs.
549. [WALSH, B. D., and C. V. RILEY.] Gas-waste *vs.* *Oureulio*. <Amer. Ent., March, 1869, v. 1, p. 147.
Answer to inquiry of H.; merits of gas-waste as an insect destroyer.
550. [WALSH, B. D., and C. V. RILEY.] Eggs of the apple-tree plant-louse again. <Amer. Ent., March, 1869, v. 1, p. 147.
Answers to inquiries of C. Williams and W. L. French; means against *Aphis mali*.
551. [WALSH, B. D., and C. V. RILEY.] Drug-store pests. <Amer. Ent., March, 1869, v. 1, p. 147.
Answer to inquiry of J. M. Good; food-habits of *Lasioderma serricorne*. See No. 510.
552. [WALSH, B. D., and C. V. RILEY.] Small galls and minings on apple-twigs. <Amer. Ent., March, 1869, v. 1, p. 147.
Answer to inquiry of O. O. A. Gardner; characters of undetermined galls and borings in twigs of apple-trees.
553. [WALSH, B. D., and C. V. RILEY.] Stinking bugs. <Amer. Ent., March, 1869, v. 1, p. 147.
Answer to inquiry of C. L. Janney; habits of an undescribed *Brachyrhynchus*.
554. [WALSH, B. D., and C. V. RILEY.] Eggs in peach-twigs. <Amer. Ent., March, 1869, v. 1, p. 147.
Answer to inquiry of G. Fisher; character of eggs of *Ecanthus niveus*.
555. [WALSH, B. D., and C. V. RILEY.] Flat-headed apple-tree borer. <Amer. Ent., March, 1869, v. 1, p. 147.
Answer to inquiry of B. F. Mudge; means against *Chrysobothris femorata*.
556. [WALSH, B. D., and C. V. RILEY.] A bundle of entomological queries. <Amer. Ent., March, 1869, v. 1, p. 148.
Answer to inquiry of W. W. Butterfield; mentions several desirable entomological books.
557. [WALSH, B. D., and C. V. RILEY.] Grape-berry moth. <Amer. Ent., March, 1869, v. 1, p. 148.
Answer to inquiry of M. C. Read; means against *Penthina vitivorana* [= *Eudemis botrana*].
558. [WALSH, B. D., and C. V. RILEY.] Hairy caterpillar. <Amer. Ent., March, 1869, v. 1, p. 148.
Answer to inquiry of T. S. Gold; characters of the larva and imago of *Arctia* [= *Pyrrharctia*] *isabella*.
559. [WALSH, B. D., and C. V. RILEY.] Borer in plum-twigs. <Amer. Ent., March, 1869, v. 1, p. 148.
Answer to inquiry of W. Caldwell; undetermined borer, allied to the oak-pruner, in plum-twigs. See No. 606.

560. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of W. W. Butterfield; identification of insects sent; comparative characters of *Arhopalus* [= *Cyllene*] *pictus* and *A.* [= *C.*] *robiniae*; variation in *Clytus* [= *Neoclytus*] *caprea*; generic characters of *Arhopalus* and *Clytus*. (See No. 582.)

561. [WALSH, B. D., and C. V. RILEY.] Pear-root borer. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of P. Earle; larva of *Prionus laicollis* injurious to the pear and grape.

562. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., March, 1869, v. 1, p. 148.

Answer to inquiry of M. H. Boyle; *Gryllotalpa longipennis* [= *columbia*] a dimorphic form of *G. borealis*.

563. [WALSH, B. D., and C. V. RILEY.] The joint-worm (*Isosoma hordei* Harris). <Amer. Ent., April, 1869, v. 1, pp. 149-158, figs. 113-118.

Natural history, variation, parasites, ravages, and means against *Isosoma hordei*; unity of habits in insects; generic classification of the joint-worm fly; figures male and female imago; figures ♂ and ♀ imagoes of *Semiotellus chalcidiphagus* n. sp., *Eurytoma* sp., and *Decatoma* sp., and of ♀ imago of *Antigaster* [= *Eupelmus*] *mirabilis*.

564. [WALSH, B. D., and C. V. RILEY.] The wavy-striped flea-beetle. (*Haltica* [*Phyllotreta*] *striolata* Illiger). <Amer. Ent., April, 1869, v. 1, pp. 158-159, fig. 119.

Description, habits, and ravages of *Phyllotreta striolata* [= *vittata*]; figures larva, pupa, and imago of the same; quotes from H. Shimer's "The wavy-striped flea-beetle" (Amer. Nat., December, 1868, v. 2, pp. 514-517).

565. [WALSH, B. D., and C. V. RILEY.] Concerning certain smart bugs. <Amer. Ent., April, 1869, v. 1, p. 160.

Preferences of *Phylloxera vitifoliae* [= *vastatrix*] and *Macrodactylus subspinosus* for certain varieties of grape-vines, of *Doryphora 10-lineata* and *Lema trilineata* for certain varieties of potato-vines, and of *Mytilaspis pomicorticis* [= *pomorum*] and *Carpocapsa pomonella* for certain varieties of apple.

566. [WALSH, B. D., and C. V. RILEY.] Curculio remedies. <Amer. Ent., April, 1869, v. 1, p. 161.

Comments on essay of L. C. Francis on the plum; coal oil not effective against *Conotrachelus nenuphar*.

567. [WALSH, B. D., and C. V. RILEY.] How great wits jump together. <Amer. Ent., April, 1869, v. 1, p. 161.

Stopping holes with hard soap ineffective against borers.

568. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., April, 1869, v. 1, p. 165.

Notices of Harris's Insects injurious to Vegetation, L'Insectologie agricole, and several other works not entomological.

569. [WALSH, B. D., and C. V. RILEY.] Eggs of the oblong-winged katydid. <Amer. Ent., April, 1869, v. 1, p. 166, fig. 120.
Answer to inquiries of T. A. Thop, J. L. Rice, B. J. Campbell, H. Cheeney, and A. McMoore; eggs of *Phylloptera* [= *Amblycorypha*] *oblongifolia* compared with those of *Platyphyllum* [= *Cyrtophyllus*] *concaum*; figures of the eggs of *A. oblongifolia*.
570. [WALSH, B. D., and C. V. RILEY.] Mossy rose gall. <Amer. Ent., April, 1869, v. 1, p. 166.
Answer to inquiry of F. W. Collins; characters of *Rhodites rosea* and its gall.
571. [WALSH, B. D., and C. V. RILEY.] Caterpillars on lombardy poplars. <Amer. Ent., April, 1869, v. 1, p. 166.
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578. [WALSH, B. D., and C. V. RILEY.] An orchard giving out. <Amer. Ent., April, 1869, v. 1, p. 168.
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580. [WALSH, B. D., and C. V. RILEY.] Gigantic rhinoceros beetle. <Amer. Ent., April, 1869, v. 1, p. 168.
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582. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., April, 1869, v. 1, p. 168.
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584. [WALSH, B. D., and C. V. RILEY.] The chinch-bug (*Micropus leucopterus* Say). <Amer. Ent., 1869, v. 1, May, pp. 169-177, fig. 122; June, pp. 194-199, figs. 135-139. Reprint: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 15-37, figs. 1-10.
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598. [WALSH, B. D., and C. V. RILEY.] Insects to be named. <Amer. Ent., May, 1869, v. 1, p. 186.
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610. [WALSH, B. D., and C. V. RILEY.] Pithy galls on blackberry-twigs. <Amer. Ent., May, 1869, v. 1, p. 188.
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617. [WALSH, B. D., and C. V. RILEY.] Mounding peach-trees. <Amer. Ent., June, 1869, v. 1, pp. 201-202.
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646. [WALSH, B. D., and C. V. RILEY.] Cotton insects. <Amer. Ent., July, 1869, v. 1, pp. 209-214, fig. 147-151.
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658. [WALSH, B. D., and C. V. RILEY.] Cut-worms. <Amer. Ent., July, 1869, v. 1, p. 224.
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659. [WALSH, B. D., and C. V. RILEY.] New York weevil. <Amer. Ent., July, 1869, v. 1, p. 224.
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664. [WALSH, B. D., and C. V. RILEY.] Hairy grape-leaf folders. <Amer. Ent., July, 1869, v. 1, p. 224.
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665. [WALSH, B. D., and C. V. RILEY.] Row of eggs in maple-twigs. <Amer. Ent., July, 1869, v. 1, p. 224.
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672. [WALSH, B. D., and C. V. RILEY.] Rose slug. <Amer. Ent., July, 1869, v. 1, p. 225.
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673. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., July, 1869, v. 1, p. 225.
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676. [WALSH, B. D., and C. V. RILEY.] Raspberry brand. <Amer. Ent., July, 1869, v. 1, p. 226.
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677. [WALSH, B. D., and C. V. RILEY.] Rose-worms. <Amer. Ent., July, 1869, v. 1, p. 226.
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679. [WALSH, B. D., and C. V. RILEY.] Ichneumon-flies. <Amer. Ent., July, 1869, v. 1, p. 226.
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683. [WALSH, B. D., and C. V. RILEY.] Plum-tree insects. <Amer. Ent., July, 1869, v. 1, p. 227.
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684. [WALSH, B. D., and C. V. RILEY.] Apple-tree bugs. <Amer. Ent., July, 1869, v. 1, p. 227.
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685. [WALSH, B. D., and C. V. RILEY.] Hickory-stem gall-louse. <Amer. Ent., July, 1869, v. 1, p. 227.
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686. [WALSH, B. D., and C. V. RILEY.] Grape-vine leaf-hopper. <Amer. Ent., July, 1869, v. 1, p. 227.
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688. [WALSH, B. D., and C. V. RILEY.] The caterpillar of the forest. <Amer. Ent., July, 1869, v. 1, p. 227.
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690. [WALSH, B. D., and C. V. RILEY.] Eggs of bugs on strawberry. <Amer. Ent., July, 1869, v. 1, p. 227.
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691. [WALSH, B. D., and C. V. RILEY.] Frog-spittle insects. <Amer. Ent., July, 1869, v. 1, p. 228. Reprint: <Cultivator and Country Gentleman, 29 July, 1869, v. 34, p. 82.
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692. [WALSH, B. D., and C. V. RILEY.] Eggs of ground-beetle. <Amer. Ent., July, 1869, v. 1, p. 228.
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696. [WALSH, B. D., and C. V. RILEY.] Elm-tree borer. <Amer. Ent., July, 1869, v. 1, p. 228.
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701. [WALSH, B. D., and C. V. RILEY.] The close of the first volume. <Amer. Ent., August, 1869, v. 1, p. 229.
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702. [WALSH, B. D., and C. V. RILEY.] The Royal horned caterpillar. (*Ceratocampa (Citheronia) regalis*, Fabr.). <Amer. Ent., August, 1869, v. 1, pp. 230-231, pl. 1.
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706. [WALSH, B. D., and C. V. RILEY.] How the Curculio flies by night. <Amer. Ent., August, 1869, v. 1, p. 244.
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761. [WALSH, B. D., and C. V. RILEY.] Raspberry worms. <Amer. Ent., August, 1869, v. 1, p. 252.
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762. [WALSH, B. D., and C. V. RILEY.] Leaf-galls and caterpillars on the sugarberry. <Amer. Ent., August, 1869, v. 1, p. 252.
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763. [WALSH, B. D., and C. V. RILEY.] Dark grape-worm. <Amer. Ent., August, 1869, v. 1, p. 252.
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764. [WALSH, B. D., and C. V. RILEY.] Too fond of honey. <Amer. Ent., August, 1869, v. 1, p. 252.
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765. [WALSH, B. D., and C. V. RILEY.] Caterpillar of polyphemus moth. <Amer. Ent., August, 1869, v. 1, p. 252.
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766. [WALSH, B. D., and C. V. RILEY.] Why noxious insects increase upon us. <Amer. Ent., September-October, 1869, v. 2, pp. 1-2.
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767. [WALSH, B. D., and C. V. RILEY.] Tortoise-beetles. <Amer. Ent., September-October, 1869, v. 2, pp. 2-5, figs. 1-3.
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768. [WALSH, B. D., and C. V. RILEY.] Scientific nomenclature. <Amer. Ent., September-October, 1869, v. 2, pp. 5-8.
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769. [WALSH, B. D., and C. V. RILEY.] Killing apple-worms by machinery. <Amer. Ent., September-October, 1869, v. 2, p. 9.
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770. [WALSH, B. D., and C. V. RILEY.] A potter wasp (*Odynerus flavipes*? Fabr.). <Amer. Ent., September-October, 1869, v. 2, p. 10, fig. 4.
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771. [WALSH, B. D., and C. V. RILEY.] Tomato-worms not poisonous. <Amer. Ent., September-October, 1869, v. 2, p. 11.
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774. [WALSH, B. D., and C. V. RILEY.] Leafy oak-gall. <Amer. Ent., September-October, 1869, v. 2, p. 25, fig. 20.
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777. [WALSH, B. D., and C. V. RILEY.] Hag-moth larva. <Amer. Ent., September-October, 1869, v. 2, p. 25, fig. 21.
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778. [WALSH, B. D., and C. V. RILEY.] Stinging bug. <Amer. Ent., September–October, 1869, v. 2, p. 25.
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780. [WALSH, B. D., and C. V. RILEY.] "Dobson." <Amer. Ent., September–October, 1869, v. 2, p. 25.
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781. [WALSH, B. D., and C. V. RILEY.] White-pine weevil. <Amer. Ent., September–October, 1869, v. 2, p. 26, fig. 22.
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782. [WALSH, B. D., and C. V. RILEY.] Unnatural secretion of wax. <Amer. Ent., September–October, 1869, v. 2, p. 26.
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783. [WALSH, B. D., and C. V. RILEY.] Raspberry borer. <Amer. Ent., September–October, 1869, v. 2, p. 26.
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784. [WALSH, B. D., and C. V. RILEY.] Cocoon of horn-bug. <Amer. Ent., September–October, 1869, v. 2, p. 26.
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786. [WALSH, B. D., and C. V. RILEY.] Cecropia moth caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 26.
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787. [WALSH, B. D., and C. V. RILEY.] How cut-worms originate. <Amer. Ent., September–October, 1869, v. 2, p. 26.
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788. [WALSH, B. D., and C. V. RILEY.] Red-humped caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 27, figs. 24–26.
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789. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., September–October, 1869, v. 2, p. 27.

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790. [WALSH, B. D., and C. V. RILEY.] Gilt gold-beetle. <Amer. Ent., September–October, 1869, v. 2, p. 27.

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791. [WALSH, B. D., and C. V. RILEY.] The trumpet grape-gall. <Amer. Ent., September–October, 1869, v. 2, p. 28, fig. 27.

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792. [WALSH, B. D., and C. V. RILEY.] Grape-berry moth. <Amer. Ent., September–October, 1869, v. 2, p. 28.

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796. [WALSH, B. D., and C. V. RILEY.] Woolly slug-like worm on apple. <Amer. Ent., September–October, 1869, v. 2, p. 29.

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798. [WALSH, B. D., and C. V. RILEY.] Goldenrod galls. <Amer. Ent., September–October, 1869, v. 2, p. 29.

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799. [WALSH, B. D., and C. V. RILEY.] Oak-leaf gall. <Amer. Ent., September–October, 1869, v. 2, p. 29.
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800. [WALSH, B. D., and C. V. RILEY.] Humble bees. <Amer. Ent., September–October, 1869, v. 2, p. 30.
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801. [WALSH, B. D., and C. V. RILEY.] Can land be insured against cut-worms and other insects? <Amer. Ent., September–October, 1869, v. 2, p. 30.
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802. [WALSH, B. D., and C. V. RILEY.] Beetles named. <Amer. Ent., September–October, 1869, v. 2, p. 30.
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803. [WALSH, B. D., and C. V. RILEY.] Royal horned-caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 30.
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804. [WALSH, B. D., and C. V. RILEY.] Parsnip caterpillar. <Amer. Ent., September–October, 1869, v. 2, p. 30.
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805. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., September–October, 1869, v. 2, p. 31.
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808. [WALSH, B. D., and C. V. RILEY.] Worm boring into cucumber. <Amer. Ent., September–October, 1869, v. 2, p. 31.
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809. [WALSH, B. D., and C. V. RILEY.] Caterpillar of the io moth. <Amer. Ent., September-October, 1869, v. 2, p. 31.
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810. [WALSH, B. D., and C. V. RILEY.] Apple-tree worms. <Amer. Ent., September-October, 1869, v. 2, p. 32.
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811. [WALSH, B. D., and C. V. RILEY.] Stinging larvæ. <Amer. Ent., September-October, 1869, v. 2, p. 32.
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812. [WALSH, B. D., and C. V. RILEY.] Lappet caterpillar on apple-tree. <Amer. Ent., September-October, 1869, v. 2, p. 32.
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813. [WALSH, B. D., and C. V. RILEY.] Spined spider. <Amer. Ent., September-October, 1869, v. 2, p. 32.
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817. [WALSH, B. D., and C. V. RILEY.] Beetles under dead fish. <Amer. Ent., September-October, 1869, v. 2, p. 32.
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818. [WALSH, B. D., and C. V. RILEY.] Universal remedies. <Amer. Ent., November, 1869, v. 2, pp. 33-35.
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819. [WALSH, B. D., and C. V. RILEY.] Tent-caterpillars and fall-web-worms.. <Amer. Ent., November, 1869, v. 2, p. 39.
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820. [WALSH, B. D., and C. V. RILEY.] The boll-worm or corn-worm. 2d article. (*Heliothis armigera*, Hübner.) <Amer. Ent., November, 1869, v. 2, pp. 42-44, fig. 29.

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821. [WALSH, B. D., and C. V. RILEY.] Galls and their architects. 2d article. <Amer. Ent., 1869-1870, v. 2: November, pp. 45-50, figs. 30-32; December-January, pp. 70-74, figs. 45-47; February, pp. 103-106, figs. 68-71.

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822. [WALSH, B. D., and C. V. RILEY.] Toads in gardens. <Amer. Ent., November, 1869, v. 2, p. 50.

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823. [WALSH, B. D., and C. V. RILEY.] Notes on the Tarantula-killer. <Amer. Ent., November, 1869, v. 2, p. 52.

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824. [WALSH, B. D., and C. V. RILEY.] Swarms of lady-birds. <Amer. Ent., November, 1869, v. 2, p. 55.

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825. [WALSH, B. D., and C. V. RILEY.] The squash-bug does not touch the white bush scollop. <Amer. Ent., November, 1869, v. 2, p. 55.

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826. [WALSH, B. D., and C. V. RILEY.] [Scientific names.] <Amer. Ent., November, 1869, v. 2, p. 57.

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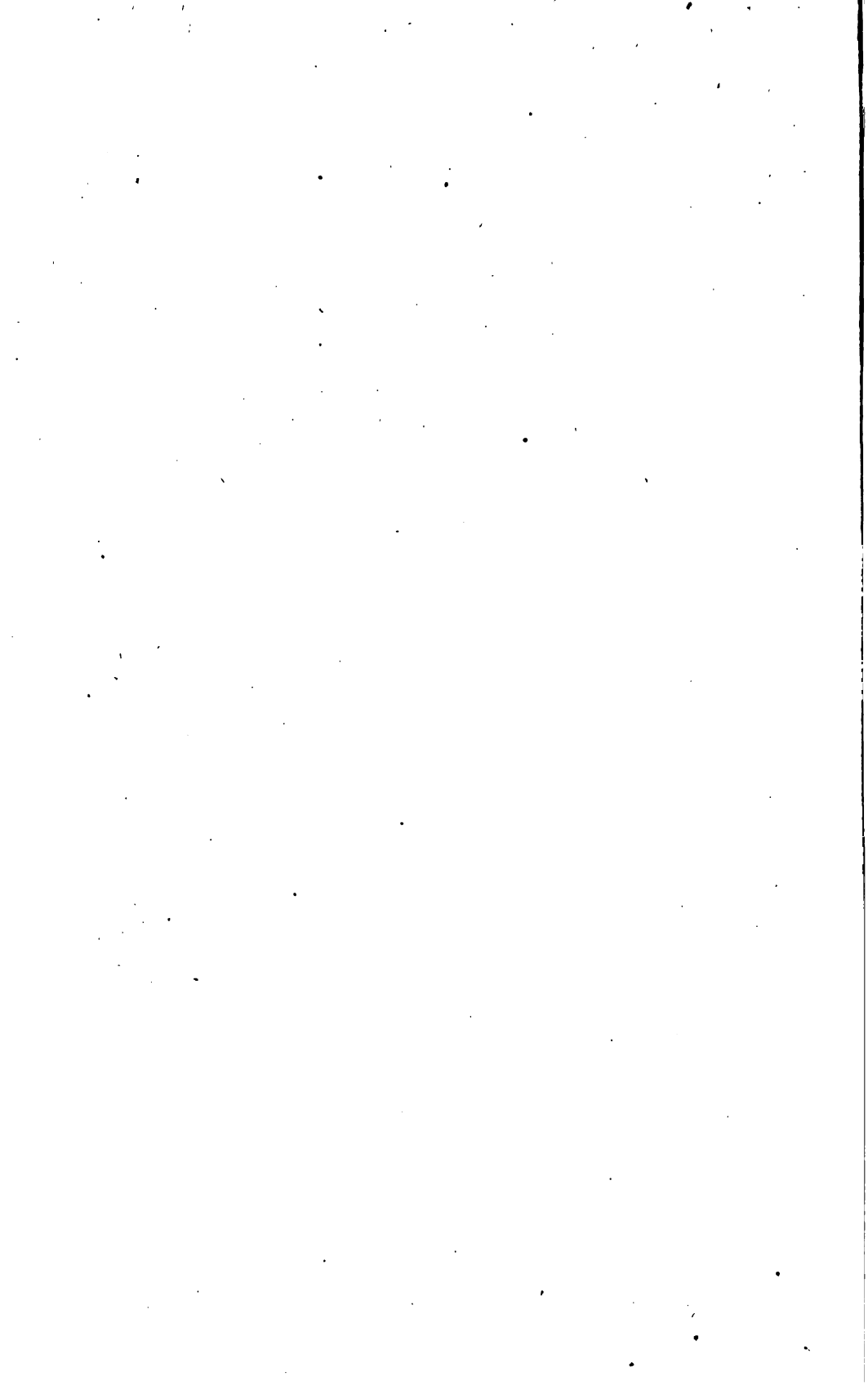
827. [WALSH, B. D., and C. V. RILEY.] On our table. <Amer. Ent., November, 1869, v. 2, pp. 57-58.

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828. [WALSH, B. D., and C. V. RILEY.] Locust borer. <Amer. Ent., November, 1869, v. 2, p. 58.
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830. [WALSH, B. D., and C. V. RILEY.] Silk spiders. <Amer. Ent., November, 1869, v. 2, p. 59.
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831. [WALSH, B. D., and C. V. RILEY.] Entomological works. <Amer. Ent., November, 1869, v. 2, p. 59.
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832. [WALSH, B. D., and C. V. RILEY.] Insects named. <Amer. Ent., November, 1869, v. 2, p. 59.
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833. [WALSH, B. D., and C. V. RILEY.] A new bee enemy. <Amer. Ent., November, 1869, v. 2, p. 59.
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834. [WALSH, B. D., and C. V. RILEY.] Thousand-legged worms. <Amer. Ent., November, 1869, v. 2, p. 59.
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835. [WALSH, B. D., and C. V. RILEY.] Cabbage-worms. <Amer. Ent., November, 1869, v. 2, p. 60, figs. 37-38.
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836. [WALSH, B. D., and C. V. RILEY.] The rape butterfly. Amer. Ent., November, 1869, v. 2, p. 60.
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837. [WALSH, B. D., and C. V. RILEY.] Bad packing. <Amer. Ent., November, 1869, v. 2, p. 60.
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838. [WALSH, B. D., and C. V. RILEY.] Granddaddy long-legs. <Amer. Ent., November, 1869, v. 2, p. 60.
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839. [WALSH, B. D., and C. V. RILEY.] Borer in apple-twig. <Amer. Ent., November, 1869, v. 2, p. 60.
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840. [WALSH, B. D., and C. V. RILEY.] Grape-vine leaf-galls. <Amer. Ent., November, 1869, v. 2, p. 61.
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PREPARED, BY AUTHORITY OF THE SECRETARY OF AGRICULTURE,

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Larva of *Lema trilineata* on potato plants in Maine mistaken for that of *Doryphora decemlineata*.
926. [RILEY, C. V.] Locusts. <Prairie Farmer, 3 November, 1866, [v. 34], n. s., v. 18, p. 290.
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927. RILEY, C. V. Caterpillars on the pine. <Prairie Farmer, 10 November, 1866, [v. 34], n. s., v. 18, p. 301. S.-b. No. 2, p. 42.
Answer to inquiry of N. R. Strong and A. L. Jones; detailed description of larva of *Lophyrus abbotii*; habits of larva; means against the insect.

928. RILEY, C. V. Elm- and pear-tree borer. <Prairie Farmer, 10 November, 1866, [v. 34], n. s., v. 18, p. 301. S.-b. No. 2, p. 42.
Answer to inquiry of James Matteson; description and habits of *Tremex columba*.
929. RILEY, C. V. Grasshoppers and locusts. <Prairie Farmer, 24 November, 1866, [v. 34], n. s., v. 18, p. 333. S.-b. No. 2, pp. 43-44.
Answer to inquiry of J. N.; distinguishes grasshoppers from locusts; characterizes *Achetada* [= *Gryllida*], *Gryllida* [= *Locustida*], and *Locustida* [= *Aceridida*]; oviposition, transformations, ravages, and migrations of *Aceridida*; recognition of *Caloptenus spretus*.
930. RILEY, C. V. Black-knot once more. <Gardeners' Mo. and Hortic., November, 1866, v. 8, pp. 331-332. S.-b. No. 2, p. 31.
Fungoid origin of black-knot [*Sphaeria morbosa*]; larvæ of *Conotrachelus nenuphar* present in the swellings.
931. RILEY, C. V. Brimstone for borers. <Prairie Farmer, 8 December, 1866, [v. 34], n. s., v. 18, p. 365. S.-b. No. 2, p. 44.
Criticism of a communication by W.; sulphur inserted in trunks of trees ineffectual as a means against insects.
932. RILEY, C. V. The wire-worm. <Cultivator and Country Gentleman, 27 December, 1866, v. 28, p. 414. S.-b. No. 2, p. 34.
Critical review of J. D. Gros' "The wire-worm;" myriapods and the larvæ of *Elatrida* are called wire-worms; separable by the number of their legs; means against them.
933. [RILEY, C. V.] Tilden tomato and the tobacco-worm. <Prairie Farmer, 5 January, 1867, [v. 35], n. s., v. 19, p. 5.
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934. [RILEY, C. V.] Remarks on *Saperda*, *Chrysobothris*, *Carpocapsa*, and *Conotrachelus*. <Prairie Farmer, 12 January, 1867, [v. 35], n. s., v. 19, p. 23.
Report of remarks made at the annual meeting of Southern Illinois Fruit Growers' Association.
935. [RILEY, C. V.] Bark-lice. <Prairie Farmer, 12 January, 1867, [v. 35], n. s., v. 19, p. 24.
Washing apple-trees with lye effective against bark-lice.
936. RILEY, C. V. Insects in the flower garden. A troublous time. <Prairie Farmer, 19 January, 1867, [v. 35], n. s., v. 19, p. 37. S.-b. No. 2, p. 45.
Answer to communication by Kate Sherman; describes larva of [*Heliothis phlogophagus*] injuring *Phlox*.
937. [RILEY, C. V.] Salt and vinegar for insects. <Prairie Farmer, 19 January, 1867, [v. 35], n. s., v. 19, p. 37. S.-b. No. 2, p. 45.
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938. RILEY, C. V. Hickory bark borer, *Scolytus caryæ*, n. sp. <Prairie Farmer, 2 February, 1867, [v. 35], n. s., v. 19, pp. 68, 69, 6 figs. S.-b. No. 2, p. 50.
 Descriptions and figures of larva and imago of *Scolytus caryæ* n. sp. [=4-*spinosus*] and of its borings in bark and wood of *Carya*; habits and ravages; figure of the pupa of *S. destructor* of Europe.
939. [RILEY, C. V.] Correction. <Prairie Farmer, 2 February, 1867, [v. 35], n. s., v. 19, p. 69. S.-b. No. 2, p. 50.
 Correction of statement made in No. 937; T. Glover not responsible for calling *Saperda bivittata* [= *candida*] a butterfly. See Nos. 222, 937, 942.
940. RILEY, C. V. Dahlia and aster stalk-borer, *Gortyna nitela* Guenée. <Prairie Farmer, 23 February, 1867, [v. 35], n. s., v. 19, p. 116, 2 figs. S.-b. No. 2, p. 58.
 Description of larva, pupa, and imago of *Gortyna nitela*; habits of and means against this insect.
941. RILEY, C. V. Borers and canker-worms. <Prairie Farmer, 9 March, 1867, [v. 35], n. s., v. 19, p. 151. S. b. No. 2, p. 61.
 Critical review of E. H. C.'s "Remedy for the borer" and of J. Huggins' "Canker-worm;" indefiniteness of the word borer; borers confined to particular trees according to species; relations between *Clytus* [= *Cyllene*] *pictus* and *C.* [= *C.*] *robinia*; habits of and means against canker-worms. See No. 954.
942. [RILEY, C. V.] The critic criticised. <Prairie Farmer, 16 March, 1867, [v. 35], n. s., v. 19, p. 169. S.-b. No. 2, p. 58.
 Reply to B. D. Walsh's "The critic criticised;" insists upon the correctness of one criticism made; acknowledges incorrectness of another. See Nos. 222, 937, 939.
943. RILEY, C. V. [*Solenobia*]. <Prairie Farmer, 16 March, 1867, [v. 35], n. s., v. 19, p. 169. S.-b. No. 2, p. 58.
 Answer to inquiry of J. C. Plumb; brief description of the larva of ?*Solenobia*; habits of the genus.
944. RILEY, C. V. Bark-lice. Their history, together with sundry remedies. <Prairie Farmer, 23 March, 1867, [v. 35], n. s., v. 19, p. 184. S.-b. No. 2, pp. 61-62. Extract: <Cultivator and Country Gentleman, 23 May, 1867, v. 29, p. 334. <Pract. Ent., April, 1867, v. 2, pp. 81-82.
 Criticises several patent remedies for ravages of bark-lice, *Coccidæ*; ignorance of entomology amongst intelligent writers; natural history of *Mytilaspis pomicorticis* [= *pomorum*].
945. RILEY, C. V. The phlox-worm. <Prairie Farmer, 6 April, 1867, [v. 35], n. s., v. 19, p. 219, 2 figs. S.-b. No. 2, pp. 63, 64.
 Describes and figures larva and imago of *Heliothis phloxiphaga*; describes pupa; seasons and habits.
946. RILEY, C. V. The potato-beetle. <Prairie Farmer, 6 April, 1867, [v. 35], n. s., v. 19, p. 219. S.-b. No. 2, p. 64.
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947. RILEY, C. V. Meadow-worms. <Prairie Farmer, 6 April, 1867, [v. 35], n. s., v. 19, p. 219. S.-b. No. 2, p. 64.
Answer to inquiry of B. S.; habits of *Tipula* in all stages.
948. RILEY, C. V. Clover-worms. <Prairie Farmer, 1867, [v. 35], n. s., v. 19, 20 April, pp. 260-261, 10 figs.; 27 April, p. 279. S.-b. No. 2, pp. 67, 68.
Habits and ravages of *Pyralis olinalis* [= *Asopia costalis*]; figures and detailed descriptions of larva, pupa, cocoon, and imago.
949. RILEY, C. V. The apple-leaf crumpler. <Prairie Farmer, 27 April, 1867, [v. 35], n. s., v. 19, p. 279, 4 figs. S.-b. No. 2, p. 68.
Answer to inquiry of A. H.; description of pupa, figure of larva-case and imago of *Phycita nebulo* [= *Acrobasis indiginella*]; habits and means against the same.
950. RILEY, C. V. Cocoons on the flowering ash. <Prairie Farmer, 27 April, 1867, [v. 35], n. s., v. 19, p. 279. S.-b. No. 2, p. 68.
Answer to inquiry of A. B. Pierce; descriptions of larva, cocoon, and imago of *Attacus promethea*; food-plants of larva; method of emergence from cocoon.
951. RILEY, C. V. Scarred apple-trees. Prairie Farmer, 27 April, 1867, [v. 35], n. s., v. 19, p. 279. S.-b. No. 2, p. 68.
Answer to inquiry of P. M. Williamson; descriptions of the injuries to apple-trees caused by *Tettigonia* sp., *Coccus harrisii* [= *Chionaspis furfurus*], and *Mytilaspis pomicoorticis* [= *pomorum*].
952. RILEY, C. V. Aphides. <Prairie Farmer, 18 May, 1867, [v. 35], n. s., v. 19, p. 332. S.-b. No. 2, p. 73.
Answer to inquiry of J. Taylor; color and propagation of *Aphis mali*; means against the same.
953. RILEY, C. V. Tree-cricket. Prairie Farmer, 18 May, 1867, [v. 35], n. s., v. 19, p. 332. S.-b. No. 2, p. 73.
Answer to inquiry of A. N. Prentiss; habits of *Oecanthus niveus*.
954. RILEY, C. V. Note. <Prairie Farmer, 18 May, 1867, [v. 35], n. s., v. 19, p. 332. S.-b. No. 2, p. 73.
Correction of No. 941; criticism unfounded.
955. RILEY, C. V. The strawberry-worm, *Emphytus maculatus* Norton. <Prairie Farmer, 25 May, 1867, [v. 35], n. s., v. 19, p. 348, 9 figs. S.-b. No. 2, p. 72.
Descriptions and figures of all stages, geographical distribution, seasons, habits, and oviposition of and means against *Emphytus* [= *Harpiphorus*] *maculatus*.
956. RILEY, C. V. White-pine worm: *Lophyrus abbotii*. <Prairie Farmer, 25 May, 1867, [v. 35], n. s., v. 19, p. 348, 7 figs. S.-b. No. 2, p. 72.
Description of imago of *Lophyrus abbotii*; figures larva, pupa, cocoon, ♀ imago and ♂ and ♀ antennæ; habits and seasons of larvæ.
957. [RILEY, C. V.] Stag-beetle. <Prairie Farmer, 25 May, 1867, [v. 35], n. s., v. 19, p. 348. S.-b. No. 2, p. 72.
Answer to inquiry of S. Barrier; habits of *Lucanus elaphus*.

958. [RILEY, C. V.] The Curculio. <Prairie Farmer, 1 June, 1867, [v. 35], n. s., v. 19, p. 368. S.-b. No. 2, p. 73.
Successful results from the use of machines for destroying *Conotrachelus nenuphar*; this insect hibernates in the imago state.
959. RILEY, C. V. Fifteen-spotted lady-bird. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.
Answer to inquiry of A. B. Knowlton; food, variable coloration of imago, and usefulness of *Mysia* [*Anatis*] *15-punctata*.
960. RILEY, C. V. Cherry Aphis. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.
Answer to inquiry of G. Lee; habits, ravages of and means against *Myzus cerasti*.
961. RILEY, C. V. Tree-cricket. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.
Eggs of *Oecanthus niveus* deposited in raspberry canes cause the death of the wood above them.
962. RILEY, C. V. Apple-tree borer. <Prairie Farmer, 8 June, 1867, [v. 35], n. s., v. 19, p. 381.
Answer to inquiry of A. B. Campbell; commends D. B. Wier's remedy against the apple-tree borer; *Saperda bivittata* [= *candida*] goes through its transformations in two years, though commonly believed to require three years.
963. RILEY, C. V. Insects affecting apple-tree roots. <Prairie Farmer, 15 June, 1867, [v. 35], n. s., v. 19, p. 397. S.-b. No. 2, p. 100.
Letter from O. B. Galusha, with answer; descriptions of young and mature wingless individuals of the root-inhabiting form, *Pemphigus pyri*, of *Schizoneura lanigera*; habits, seasons, and reproduction of this form; its gall-making and means against it; description of larva of *Cecidomyia* species found with the lice; and of larva and imago of *Mycetophila persica* [n. sp. ?]; seasons of the latter; larva of *Saperda calcarata* bores in roots of apple; larva of *Helops micans* feeds on decaying apples; *Julus* [*Spirobolus*] *marginalatus* infested with *Gamasus juloides*.
964. RILEY, C. V. A chapter on cut-worms. <Prairie Farmer, 22 June, 1867, [v. 35], n. s., v. 19, pp. 413-414, 7 figs. S.-b. No. 2, pp. 79-80.
Extract from J. Townley's "Do cut-worms destroy tree buds?". Buds of fruit trees destroyed by the larvæ of *Agrotididæ*; other ravages and means against the same; descriptions of the larvæ of *Agrotis subgothica* [= *A. herilis* and *A. tricosæ*], *A. telifera* [= *A. ypsilon*], and *Celæna* [= *Hadena*] *renigera*; description of *A. cochraneis* n. sp. [= *A. messoria*]; figures larva and imago of *A. cochraneis*, *A. telifera*, and *Celæna renigera*; and imago of *A. subgothica*; habits, seasons, and vernacular names of *Agrotididæ*.
965. [RILEY, C. V.] Strawberry-worm. <Prairie Farmer, 22 June, 1867, [v. 35], n. s., v. 19, p. 414. S.-b. No. 2, p. 80.
Answer to inquiry of A. R. Whitney; geographical distribution of *Emphytus* [= *Harpiphorus*] *maculatus*.
966. RILEY, C. V. Insects stripping the bur-oak. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, p. 81.
Answer to inquiry of A. B. Price; habits of *Lachnosterna pilosicollis* [= *tristis*.]

967. RILEY, C. V. Borers. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, p. 81.
Answer to inquiry of J. Wentworth; means against *Clytus* [= *Cyllene*] *robiniae* and *Xyleutes* [= *Cossus*] *robiniae*.
968. RILEY, C. V. Potato-beetle. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, pp. 81-82.
Answer to inquiries of J. L. W. and G. L. Merriwether; *Doryphora 10-lineata* three-brooded; its occurrence at Shipman, Ill.
969. [RILEY, C. V.] Smith's patent Curculio trap. <Prairie Farmer, 13 July, 1867, [v. 36], n. s., v. 20, p. 21. S.-b. No. 2, p. 82.
Communication from N. C. Coffman, with reply; condemns J. Smith's Curculio trap.
970. RILEY, C. V. [*Aphis ribis*]. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
Answer to inquiry of C. J. Eckhart; means against *Myzus ribis*.
971. RILEY, C. V. *Mantis carolina*. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
Answer to communication of J. H. Graves; eggs of *Mantis* [= *Phasmomantis*] *carolina* found in Ogle County, Ill.
972. RILEY, C. V. Lappet caterpillars on the apple. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
Answer to communication of Perkins and Congdon; description of the larva, pupa, cocoon, and imago of *Gastropacha* [= *Tolyte*] *velleda*.
973. RILEY, C. V. Apple-bark lice on pears. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
Mytilaspis pomicorticis [= *pomorum*] on the fruit of pear-trees; said to occur on currants, plum, and black oak.
974. RILEY, C. V. Currant-bush borer. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
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975. RILEY, C. V. Apple-leaf crumpler. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
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976. RILEY, C. V. Tomato-stalk borer. <Prairie Farmer, 3 August, 1867, [v. 36], n. s., v. 20, p. 69. S.-b. No. 2, p. 81.
Answer to inquiry of O. G. Nevins; food-plants of *Gortyna nitela*.
977. RILEY, C. V. A few errors corrected. <Wisc. Farmer, 17 August, 1867. S.-b. No. 2, p. 83.
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978. RILEY, C. V. Curculio. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.
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979. RILEY, C. V. Hop-vine caterpillars. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.
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980. RILEY, C. V. Wheat-worms. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.
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981. RILEY, C. V. [Root-borer.] <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.
Communication from S. T. Kelsey, with answer; ravages of an unknown cerambycid larva which destroys the roots of various plants.
982. RILEY, C. V. Bark-lice on the pear. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.
Letter from T. D. Plumb, with answer; *Mytilaspis pomicorticis* [= *pomorum*] lives on fruit of pear and crab-apple; the scale a secretion; extent of injuries caused by this insect.
983. RILEY, C. V. A nuisance made useful. <Prairie Farmer, 7 September, 1867, [v. 36], n. s., v. 20, p. 148. S.-b. No. 2, p. 82.
Means against *Doryphora 10-lineata* discredited.
984. RILEY, C. V. Strawberry leaf-roller. <Prairie Farmer, 5 October, 1867, [v. 36], n. s., v. 20, p. 212. S.-b. No. 2, p. 100.
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985. RILEY, C. V. False caterpillars on the pine. <Prairie Farmer, 5 October, 1867, [v. 36], n. s., v. 20, p. 212. S.-b. No. 2, p. 101.
Answer to inquiry of A. S. Fuller; habits and description of *Lophyrus lecontei*.
986. RILEY, C. V. An unknown worm. <Prairie Farmer, 5 October, 1867, [v. 36], n. s., v. 20, p. 212. S.-b. No. 2, p. 101.
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987. [RILEY, C. V.] Bark-louse. <Prairie Farmer, 19 October, 1867, [v. 36], n. s., v. 20, p. —. S.-b. No. 2, p. 75.
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988. [RILEY, C. V.] Editorial excursion to the Rocky Mountains. <Prairie Farmer, 7 December, 1867, [v. 36], n. s., v. 20, pp. 353-354. S.-b. No. 2, pp. 112-113.
List of plants, insects, and mammals observed.
989. RILEY, C. V. Bark-lice. <Prairie Farmer, 21 December, 1867, [v. 36], n. s., v. 20, p. 389. S.-b. No. 2, p. 112.
Answer to inquiries of G. Backster and J. C. Cobbe; means against *Mytilaspis pomicorticis* [= *pomorum*].
990. RILEY, C. V. Root Aphis. <Prairie Farmer, 21 December, 1867, [v. 36], n. s., v. 20, p. 389. S.-b. No. 2, p. 112.
Answer to inquiry of J. M. Jordan; means against the root and stem forms of *Schizoneura lanigera*.
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Communications from C. W. Murtfeldt asserting the possession of poisonous qualities by the larvæ of *Doryphora 10-lineata*.

992. RILEY, C. V. Cut-worm. Fall and spring plowing. <Moore's Rural New Yorker, ———, 1867. S.-b. No. 2, p. 94.
Criticism of article by Agricola.
993. RILEY, C. V. Entomology. <Prairie Farmer Annual [No. 1 for 1868], 1867, pp. 53–59, 6 figs. S.-b. No. 2, pp. 125–126; No. 14, pp. 216–219.
Descriptions and figures of larva, pupa, and imago of *Coptocycla* [= *Cassida*] *bivittata*; habits, seasons, and means against it; list of *Cassididae* injurious to sweet-potato. Descriptions of larva, nidus, and imago of *Desmia maculalis*, figures pupa; habits and seasons of and means against it. Figures *Colaspis flavida*; describes its supposed habits. Food-plants of *Heliothis armigera*. Figures larva and imago of *Gortyna nitela*; its food-plants, seasons, and hibernation. Figures larva and imago of *Heliothis phlogophagus*; synonymy, geographical distribution, and means against it; remarks on the balance of nature. Figures larva, pupa, cocoon, and imago of *Asopia costalis*; its synonymy and ravages.
994. RILEY, C. V. Bark-lice. <Prairie Farmer, 15 February, 1868, [v. 37], n. s., v. 21, p. 100. S.-b. No. 2, p. 118.
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995. RILEY, C. V. Potato-beetle. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-b. No. 2, p. 119; No. 3, p. 58.
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996. RILEY, C. V. Apple-tree plant-lice. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-b. No. 2, p. 119; No. 3, p. 58.
Letter from L. M., with answer; habits of and means against *Aphis mali*.
997. RILEY, C. V. Apple-root blight. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-b. No. 2, p. 119; No. 3, p. 58.
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998. RILEY, C. V. Apple leaf-crumpler. <Prairie Farmer, 22 February, 1868, [v. 37], n. s., v. 21, p. 117. S.-p. No. 2, p. 119; No. 3, p. 58.
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999. RILEY, C. V. Tree-cricket. <Prairie Farmer, 14 March, 1868, [v. 37], n. s., v. 21, p. 164. S.-b. No. 2, p. 120; No. 3, p. 58.
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1000. RILEY, C. V. Egg-masses and cocoons on apple-trees. <Prairie Farmer, 14 March, 1868, [v. 37], n. s., v. 21, p. 164. S.-b. No. 2, p. 120; No. 3, p. 58.
Answer to inquiry of a correspondent; description of egg-masses and of larva of *Orgyia leucostigma*; beneficial influence and means of encouraging parasites.

1001. RILEY, C. V. Hop insects; Hop Aphis. <Prairie Farmer, 21 March, 1868, [v. 37], n. s., v. 21, p. 184. S.-b. No. 3, p. 58.
Brief account of and means against *Hypena humuli* [= *scabra*] and *Phorodon humuli*.
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* Reprint: <Cultivator and Country Gentleman, 14 May, 1874, v. 39, pp. 310-311, 3 figs.

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1060. RILEY, C. V. Eggs of the Mantis or rear-horse. <Moore's Rural New Yorker, 10 April, 1869, v. 20, p. 234, 2 figs. S.-b. No. 3, p. 52.

Answer to inquiry of T. C. Bartle; description of *Mantis* [= *Phasmomantis carolina*]; its food, habits, oviposition, and parasites; figures its egg-masses and those of *Phylloptera* [*Amblycorypha*] *oblongifolia*.

1061. RILEY, C. V. Native bark-lice on apple-trees. <Prairie Farmer, 17 April, 1869, [v. 39], n. s., v. 23, p. 122, 1 fig. S.-b. No. 3, p. 57.

Answer to inquiry of T. B. Gardner; life history of and means against *Diaspis harrisii* [= *Chionaspis furfurus*]; figure of the same.

1062. RILEY, C. V. Curculio. <Prairie Farmer, 17 April, 1867, [v. 39], n. s., v. 23, p. 122. S.-b. No. 3, p. 57.

Answer to inquiry of James Weed; habits of and means against *Conotrachelus nenuphar*.

1063. RILEY, C. V. Cherry-tree borers. <Prairie Farmer, 17 April, 1869, [v. 39], n. s., v. 23, p. 122. S.-b. No. 3, p. 57.

Answer to inquiry of Onargo Horticultural Society; larvæ of *Buprestis* [= *Dicra*] *divaricata* and of *Trochilium* sp., injurious to cherry-trees; soft-maple attacked by *T.* [= *Egeria*] *acerni*; means against these insects.

1064. RILEY, C. V. White-grub fungus. <Prairie Farmer, 15 May, 1869, [v. 39], n. s., v. 23, p. 154. S.-b. No. 3, p. 76.
Letter from D. W. Tindall, with answer; ravages of *Lachnosterna quercina* [= *fusca*] in Clinton County, Mo., in 1868; *Torrubia* growing on the larvae in 1869.
1065. RILEY, C. V. The canker-worm, *Anisopteryx vernata* Peck. <Moore's Rural New Yorker, 29 May, 1869, v. 20, p. 345, figs. S.-b. No. 3, p. 73.
Description, figures, and natural history of canker-worms; the two species are confounded.
1066. RILEY, C. V. The seed-corn maggot, *Anthomyia zeas*, Riley. Destroying the seed after it is planted. <Moore's Rural New Yorker, June, 1869, fig. S.-b. No. 3, p. 81. Advance print, with changes: <1st Ann. Rept. State Ent. Mo., March, 1869, pp. 154-156, figs. 86-87.
See No. 1059 for synopsis of contents.
1067. RILEY, C. V. Cherry-tree plant-lice. <Moore's Rural New Yorker, 10 July, 1869, v. 20, p. 443. S.-b. No. 3, p. 83.
Answer to inquiry of G. J. Magee; means against *Aphis* [= *Myzus*] *cerasi*.
1068. RILEY, C. V. Gooseberry span-worms. <Moore's Rural New Yorker, 10 July, 1869, v. 20, p. 443. S.-b. No. 3, p. 83.
Letter from A. Yancey, with answer; occurrence of *Eufitchia ribearia* in Iowa; habits and means against it; habits of and influence of weather on *Blissus leucopterus*; scarcity of *Doryphora 10-lineata* in Iowa.
1069. RILEY, C. V. Apple-leaf crumpler mistaken for Curculio. <Prairie Farmer, 10 July, 1869, [v. 40], n. s., v. 24, p. 218, fig. S.-b. No. 3, p. 80.
Letter from B. T. Taylor; improper use of the word Curculio; figures larva-case and imago of *Phycita nebulo* [= *Acrobasis indiginella*]; means against it; outline figure of *Conotrachelus nenuphar*.
1070. RILEY, C. V. Peach-tree borer. <Prairie Farmer, 10 July, 1869, [v. 40], n. s., v. 24, p. 218. S.-b. No. 3, p. 80.
Answer to inquiry of C. Allen; habits of and means against *Ageria* [= *Sannina*] *exitiosa*.
1071. RILEY, C. V. To protect plums from Curculio. <Prairie Farmer, 10 July, 1869, [v. 40], n. s., v. 24, p. 218. S.-b. No. 3, p. 80.
Answer to inquiry of H. H. S.; recommends the collection of the imago of *Conotrachelus nenuphar* by jarring.
1072. RILEY, C. V. White-grub; information wanted. <Prairie Farmer, 28 August, 1869, [v. 40], n. s., v. 24, p. 274, 4 figs. S.-b. No. 3, p. 95.
Letter from A. T. V., with answer; habits of and means against *Lachnosterna quercina* [= *fusca*]; figures of larva and imago.
1073. RILEY, C. V. Unknown corn pest. <Prairie Farmer, 28 August, 1869, [v. 40], n. s., v. 24, p. 274. S.-b. No. 3, p. 95.
Letter from E. B. Hickey, with answer; ravages of cut-worms and of an unknown pest on maize; brief description and habits of the latter.

1074. RILEY, C. V. Larva of the grape-vine flea-beetle. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, pp. 100, 103.

Answer to inquiry of D. D. Vosburgh; habits, ravages, and means against *Graptodera* [= *Haltica*] *chalybea*.

1075. RILEY, C. V. Rose bug. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, pp. 100, 103.

Answer to inquiry of a subscriber; description of imago, transformations of, and means against *Macrodactylus subapinosus*.

1076. RILEY, C. V. Large green caterpillar on the apple. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100.

Answer to inquiry of S. E. A. Palmer; descriptions of larva and imago of *Attacus oecropia*; its habits and seasons.

1077. RILEY, C. V. Conical galls on leaves of wild grape-vine. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100.

Answer to inquiry of D. McClaine; description of galls of *Cecidomyia vitis-viticola*; characters of the larvæ of *Cecidomyia*.

1078. RILEY, C. V. A strange bug. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100; No. 4, p. 3.

The insects described in North Carolina's "A strange bug," were probably *Pseocus venosus*; habits of the genus *Pseocus*.

1079. RILEY, C. V. Currant-worms and black-currants. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100; No. 4, p. 3.

Critical review of Addi on currant-worms; in North America three species of larvæ feed on the leaves of currants, and two species of borers live within the stem.

1080. RILEY, C. V. Curculio. <Moore's Rural New Yorker, 28 August, 1869, v. 20, p. 555. S.-b. No. 3, p. 100; No. 4, p. 3.

Commendation of an editorial criticism of Northwest's article on the Curculio.

1081. [RILEY, C. V.] Insects injurious to the grape-vine. [No. 1.] <Amer. Ent., August, 1869, v. 1, pp. 231-234, figs. 169-173. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 87-91, figs. 60-63.

Treats of *Prionus laticollis* and *P. imbricornis*. See No. 1127 for synopsis of contents.

1082. [RILEY, C. V.] Insects infesting the sweet-potato. <Amer. Ent., August, 1869, v. 1, pp. 234-238, figs. 174-181. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 56-64, figs. 26-38.

Treats of tortoise-beetles, *Cassididae*. See No. 1127 for synopsis of contents.

1083. RILEY, C. V. The borers. <Western Rural, September, 1869. S.-b. No. 4, p. 2.

Means against *Ageria cucurbitæ* [= *Melittia ceto*].

1084. RILEY, C. V. Supposed bark-lice eggs in Missouri. <Prairie Farmer, 4 September, 1869, [v. 40], n. s., v. 24, p. 282. S.-b. No. 3, p. 95.
Letter from J. Reed, with answer; eggs of a moth mistaken for those of *Mytilaspis pomicorticis* [= *pomorum*]; the latter unknown in Missouri.
1085. RILEY, C. V. New York weevil on apple-trees. <Prairie Farmer, 4 September, 1869, [v. 40], n. s., v. 24, p. 282, 3 figs. S.-b. No. 3, p. 95.
Letter from R. M. Guy, with answer; figures of larva and imago, description of imago, geographical distribution, methods of oviposition, food-plants, and means against *Ithyoerus noveboracensis*.
1086. [RILEY, C. V.] Insects injurious to the grape-vine. No. 2. <Amer. Ent., September-October, 1869, v. 2, pp. 22-24, figs. 12-16. Reprint, with slight changes. <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 71-73, figs. 44-48.
Treats of *Chærocampa pampinatrix* [= *Ampelophaga myron*]; see No. 1127 for synopsis of contents.
1087. RILEY, C. V. Larva of the imperial moth. <Prairie Farmer, 9 October, 1869, [v. 40], n. s., v. 24, p. 322. S.-b. No. 3, p. 92.
Letter of C. H. Thayer, with answer; description of larva, pupa, and imago of *Ceratocampa* [= *Eacles*] *imperialis*; food-plants of the same and of *C.* [= *Citheronia*] *regalis*.
1088. RILEY, C. V. Apple snout-beetle or four-humped Curculio. <Prairie Farmer, 9 October, 1869, [v. 40], n. s., v. 24, p. 322. S.-b. No. 3, p. 92.
Letter from R. W. Gandy, with answer; habits and description of *Anthonomus quadrigibbus*; recommends jarring.
1089. RILEY, C. V. That venomous potato-worm! <Moore's Rural New Yorker, 20 November, 1869, v. 20, p. —. S.-b. No. 3, pp. 107; 112.
Critical review of several recent articles upon tomato-worms; structure and harmlessness of larvæ of *Sphingidæ*; geographical distribution of *Sphinx* [= *Protoparce*] *carolina* and *S. quinquemaculata* [= *P. celeus*].
1090. [RILEY, C. V.] The bag-worm, *alias* basket-worm, *alias* drop-worm, *Thyridopteryx ephemeraeformis*, Haw. <Amer. Ent., November, 1869, v. 2, pp. 35-38, fig. 24.
Geographical distribution, food-plants, seasons, transformations, parasites, copulation, and oviposition of and means against *Thyridopteryx ephemeraeformis*; figures and descriptions of larva, larva-cases, pupa, and imago; description of eggs; abodes constructed by insects.
1091. [RILEY, C. V.] Insects injurious to the grape-vine. No. 3. <Amer. Ent., November, 1869, v. 2, pp. 54-55, figs. 33-35. Reprint, with slight changes. <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 74-76, figs. 49-51.
Treats of *Philampelus achemon*; see No. 1127 for synopsis of contents.
1092. RILEY, C. V. The saddle-back caterpillar. <Moore's Rural New Yorker, 4 December, 1869, v. 20, p. —, fig. S.-b. No. 3, p. 103.
Letters from A. W. Baker and G. T. Cost, with answer; figures and characterization of the larva of *Empretia stimulea*; food-plants, urticating properties, and transformations; description of the imago.

1093. RILEY, C. V. The seventeen-year Cicada. <Prairie Farmer, ——— 1869. S.-b. No. 3, p. 55.
Answer to communication of W. J. B., concerning *Cicada* [= *Tibicen*] *septendecim*.
1094. RILEY, C. V. Death of a hen. <Rural New Yorker, ——— 1869, fig. S.-b. No. 3, p. 75.
Occurrence of *Goniocotes hologaster* in great numbers on a hen; means against the same; figure of it.
1095. RILEY, C. V. Cut-worm eggs. <Prairie Farmer, ——— 1869. S.-b. No. 3, p. 81.
Habits and place of oviposition of *Agrotis inermis* [= *saucia*]; description of its eggs and larvæ.
1096. RILEY, C. V. Potato bugs. <Prairie Farmer, ——— 1869. S.-b. No. 3, p. 81.
Means against *Doryphora 10-lineata*.
1097. RILEY, C. V. That glow-worm. <Cultivator and Country Gentleman, 6 January, 1870, v. 35, p. 5, fig. S.-b. No. 4, p. 23.
Reprint: <Amer. Ent., October, 1880, v. 3, n. s., v. 1, p. 254, fig.
Figures larva and imago of *Photuris pennsylvanica*; *Photinus pyralis* also luminous in larval and adult stages; comparison with *Lampyrus noctiluca*.
1098. [RILEY, C. V.] In memoriam. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 65–68.
Biographical and obituary notice of B. D. Walsh.
1099. [RILEY, C. V.] The harlequin cabbage-bug, *Strachia histrionica*, Hahn. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 79–80, fig. 56.
Enumeration of the enemies of the cabbage in the United States; methods of their injury; importation and spread of some species; figures of the imago; description of eggs, habits, geographical distribution, seasons, and odors of *Strachia* [= *Murgantia*] *histrionica*; extract from G. Lincecum's "Texan cabbage-bug."
1100. [RILEY, C. V.] An entomologist caught napping. <Amer. Ent., December, 1869–January, 1870, v. 2, p. 84.
Criticism of the view that trees, grasses, or any other particular forms of vegetation are the natural coverings of the earth; this criticism applied especially to John Curtis.
1101. [RILEY, C. V.] Poisonous qualities of the Colorado potato-bug. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 85–86.
Extract from "Winona Republican," with remarks upon the poisonous nature of the blood of *Doryphora 10-lineata*.
1102. [RILEY, C. V.] Insects injurious to the grape-vine. No. 4. <Amer. Ent., December, 1869–January, 1870, v. 2, pp. 89–90, figs. 58–59. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 76–78, figs. 52–53.
Treats of *Philampelus satellitia* [= *pandorus*]; see No. 1127 for synopsis of contents.

1103. [RILEY, C. V.] Toads *vs.* bugs. <Amer. Ent., December, 1869-January, 1870, v. 2, p. 91.
Translation of extracts from Fogt's "Noxious and beneficial animals;" existence of a commerce in toads between France and England; usefulness, tameness, and gratitude of toads.
1104. [RILEY, C. V.] The tomato-worm again. <Amer. Ent., December, 1869-January, 1870, v. 2, pp. 91-92.
Reprint, with comments, of article entitled "The tomato-worm," from Syracuse Standard; absurd nature of newspaper accounts of insects.
1105. [RILEY, C. V.] Mr. Walsh's successor. <Amer. Ent., December, 1869-January, 1870, v. 2, pp. 92-93.
Condition in which B. D. Walsh left the office of State Entomologist of Illinois at his death; plans of his intended second report; provisions for the preparation of the same and the filling of the office.
1106. [RILEY, C. V.] To our subscribers. <Amer. Ent., December, 1869-January, 1870, v. 2, p. 93.
Proposed change in the character of the American Entomologist.
1107. [RILEY, C. V.] The Walsh entomological collection. <Amer. Ent., December, 1869-January, 1870, v. 2, pp. 93-94.
Statement of the conditions under which the Walsh collection of insects is to be sold; expression of preferences in regard to its disposition; extent and method of preservation of the collection.
1108. [RILEY, C. V.] A State entomologist for Minnesota. <Amer. Ent., December, 1869-January, 1870, v. 2, p. 94.
Commendation of resolutions passed by the Minnesota State Horticultural Society recommending the appointment of a state entomologist; promotion of entomological studies by appropriations from the several States.
1109. RILEY, C. V. [Field for the entomologist in the South.] <Amer. Ent., v. 2, December, 1869-January, 1870, p. 94; February, 1870, p. 121.
Extent and novelty of entomological work in the southern United States; J. P. Stelle at work in this field.
1110. [RILEY, C. V.] On our table. <Amer. Ent., December, 1869-January, 1870, v. 2, pp. 95, 96.
Notices of J. T. C. Ratzeburg's works on "Forest trees" and "Weeds of Germany and Switzerland."
1111. [RILEY, C. V.] Information wanted. <Amer. Ent., December, 1869-January, 1870, v. 2, p. 96.
Answer to inquiry of M. A. Kendall; habits of *Xylocopa carolina* [= *virginica*], *Rhyssa* [= *Thalessa*] *lunator*, and *Spectrum* [= *Diapheromera*] *femorata*.
1112. [RILEY, C. V.] The Cecropia moth, *Attacus cecropia*, Linn. <Amer. Ent., February, 1870, v. 2, pp. 97-102, fig. 59 [bis]-67.
Descriptions and figures of larva, cocoon and imago of *Attacus cecropia*; figure of pupa; descriptions of egg and of young larva at its several stages; nomenclature, food-plants, and parasites; its value as a silk-worm; figures and descriptions of *Ophion macrurum*, *Exorista cecropiæ* n. sp., and *Chalcis* [= *Spilochalcis*] *mariae* n. sp.; figure of larva of *Ophion macrurum* and of cocoons of *Cryptus nuncius*; habits of these parasites; *Exorista cecropiæ* considered a variety of *E. militaris* [= *Nemoræa leucanie*].

1113. RILEY, C. V. Report of the committee on entomology. Read . . . before the Missouri State Horticultural Society. < Amer. Ent., February, 1870, v. 2, pp. 106-109. Reprint: < 2d Ann. Rept. State Ent. Mo., March, 1870, pp. 5-8, 13-15.
See No. 1127 for synopsis of contents.
1114. [RILEY, C. V.] Silk-worm eggs. < Amer. Ent., February, 1870, v. 2, p. 109.
Seventy-eight packages of silk-worm eggs, valued at \$800 per package and weighing two tons, shipped from Yokohama to France via California and the Pacific Railroad.
1115. RILEY, C. V. Imported insects and native American insects. < Amer. Ent., February, 1870, v. 2, pp. 110-112, fig. 72-75. Reprint: < 2d Ann. Rept. State Ent. Mo., March, 1870, pp. 8-12.
See No. 1127 for synopsis of contents.
1116. [RILEY, C. V.] The trumpet grape-gall, *Vitis viticola* O. S. < Amer. Ent., February, 1870, v. 2, pp. 113-114, fig. 76.
Figure of the gall of *Cecidomyia vitis-viticola*. *C. v.-litus* a synonym; occurrence of similar gall in England on *Tilia* probably caused by mites.
1117. [RILEY, C. V.] The goat-weed butterfly, *Paphia glycerium* Doubleday. < Amer. Ent., February, 1870, v. 2, pp. 121-123, figs. 81-83. Reprint, with slight changes. < 2d Ann. Rept. State Ent. Mo., March, 1870, pp. 124-128, figs. 94-96.
See No. 1127 for synopsis of contents.
1118. [RILEY, C. V.] Insects injurious to the grape-vine. No. 5. < Amer. Ent., February, 1870, v. 2, pp. 123-124, fig. 84. Reprint, with slight changes. < 2d Ann. Rept. State Ent. Mo., March, 1870, pp. 78-79, fig. 54.
Treats of *Thyreus abbotii*; see No. 1127 for synopsis of contents.
1119. [RILEY, C. V.] Scorpion in Kansas. < Amer. Ent., February, 1870, v. 2, p. 126.
Answer to inquiry of K. Kelsey; occurrence of *Buthus carolinianus* in Texas, Missouri, and Kansas.
1120. [RILEY, C. V.] The grain Bruchus of Europe just imported. < Amer. Ent., February, 1870, v. 2, pp. 126-127, fig. 85.
Answer to inquiry of A. S. Fuller; notice of the recent importation into New York of the European *Bruchus granarius*; danger of and remedy for such importation; habits and ravages of and means against the beetle in Europe as described in J. Curtis's, "Farm Insects;" figure of the imago and of infested beans; figures of larva, pupa, and imago of *B. pisi* and of infested pea.
1121. [RILEY, C. V.] Locust borer. < Amer. Ent., February, 1870, v. 2, pp. 127-128, figs. 86-89.
Answer to inquiry of J. M. Shaffer; habits, food-plants, seasons, and ravages of and means against *Xyleutes* [= *Cossus*] *robinia*; figures larva, pupa, and male and female imagos.

1122. [RILEY, C. V.] Eggs of snowy tree-cricket on raspberry canes. <Amer. Ent., February, 1870, v. 2, p. 128.
Answer to inquiry of J. B. Root; oviposition of and means against *Ecanthus niveus*.
1123. [RILEY, C. V.] Spotted rove-beetle. <Amer. Ent., February, 1870, v. 2, p. 128.
Answer to inquiry of J. Huggins; habits of *Staphylinus maculosus* and of rove-beetles in general.
1124. [RILEY, C. V.] Raspberry gouty gall. <Amer. Ent., February, 1870, v. 2, p. 128, fig. 90.
Answer to inquiry of C. Carpenter; ravages of and means against *Agrilus ruficollis*; description and figure of larva.
1125. [RILEY, C. V.] Parasitic cocoons. <Amer. Ent., February, 1870, v. 2, p. 128, fig. 91.
Answer to inquiry of G. C. Brackett; figures cocoons and conjectures as to the habits of [*Microplitis ceratoniae* var. *actuosus*].
1126. [RILEY, C. V.] The pigeon Tremex in apple. <Amer. Ent., February, 1870, v. 2, p. 128.
Answer to inquiry of J. Huggins; habits and food-plants of *Tremex columba*; description of imago; *Rhyssa* [= *Thalessa*] *lunator* destroys the larva.
1127. RILEY, C. V. Second annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the State. <5th Ann. Rept. State Board of Agric. for 1869, March, 1870, pp. 136 + 6, 99 figs. Separate: <Jefferson City, Mo., March, 1870, pp. 136 + 6, 99 figs.

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1128. [RILEY, C. V.] Mr. Walsh's portrait. <Amer. Ent., March, 1870, v. 2, p. 129.

Remarks accompanying the portrait of B. D. Walsh; resolutions passed on the death of Walsh by the London branch of the Entomological Society of Ontario; by the American Entomological Society, the Illinois State Horticultural Society, and by the Kansas State Horticultural Society.

1129. RILEY, C. V. The plum Curculio, *Conotrachelus nenuphar* Herbst. <Amer. Ent., March, 1870, v. 2, pp. 130-137, fig. 92.

Paper read before the Illinois State Horticultural Society at its 14th annual meeting; summary of established facts and discussion of mooted points in the life-history of *Conotrachelus nenuphar*; seasons, habits, transformations, food-plants, enemies of and means against the same; descriptions and figures of larva and imago; figure of pupa; hibernation and the effects of climate on the prolongation of the life of insects.

1130. RILEY, C. V. Insects injurious to the grape-vine. No. 6. <Amer. Ent., March, 1870, v. 2, pp. 150-153, figs. 100-102. Reprint, with slight changes: <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 80-82, fig. 55.

Treats of *Alypia octomaculata*; see No. 1127 for synopsis of contents.

1131. [RILEY, C. V.] Pithy blackberry gall. <Amer. Ent., March, 1870, v. 2, pp. 159-160, fig. 103.
 Answer to inquiry of C. W. ["S. C."] Spaulding; descriptions and figures of larva and gall of *Diastrophus nebulosus*; figure of pupa; seasons, food-plant, guest-fly [*Periclistus sylvestris*], and parasite [*Eurytoma diastrophii*] and means against this species; the genus *Diastrophus* confined to *Rosa*, *Cynips* to *Cupuliferæ* and *Antistrophus* to *Compositæ*.
1132. [RILEY, C. V.] Clover-worms. <Amer. Ent., March, 1870, v. 2, p. 160.
 Answer to inquiry of G. Pauls; geographical distribution, food-habits, vernacular names and synonymy of and means against *Asopia costalis*.
1133. [RILEY, C. V.] Seed-ticks under bark of apple-trees. <Amer. Ent., March, 1870, v. 2, p. 160.
 Answer to inquiry of O. B. Galusha; character of insects as regards the number of legs; occurrence of *Ixodes unipunctata* under outer bark of apple-trees at Morris, Ill.
1134. [RILEY, C. V.] Parasitic cocoons. <Amer. Ent., March, 1870, v. 2, p. 160.
 Answer to inquiry of S. W. Beckworth; occurrence of a mass of cocoons of [*Microplitis ceratomia* var. *actuosus*] under red-oak at South Pass, Ill.
1135. [RILEY, C. V.] Is any knowledge useless? <Amer. Ent. and Bot., April, 1870, v. 2, pp. 164-166.
 Reprint of article from Manufacturer and Builder, November, 1869; minute investigations in science may be of great practical importance; cases in which a knowledge of life-history of *Galeruca californiensis* [= *zanthomelæna*], *Conotrachelus nenuphar*, and *Lymeria navale* was or might have been of great value.
1136. [RILEY, C. V.] Tomato fruit-worm. <Amer. Ent. and Bot., April, 1870, v. 2, p. 172.
 Notice of statement by J. J. Weir that *Heliothis armigera* was bred from larvæ which fed on the fruit of tomato in England; food-plants of this insect.
1137. RILEY, C. V. Insects injurious to the grape-vine. No. 7. <Amer. Ent. and Bot., April, 1870, v. 2, pp. 173-174, figs. 107-108.
 Reprinted, with slight changes, from <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 85-87, figs. 58-59.
 Treats of *Proctis* [= *Harrisina*] *americana*; see No. 1127 for synopsis of contents.
1138. [RILEY, C. V.] The death web of young trout. <Amer. Ent. and Bot., April, 1870, v. 2, p. 174.
 Reprint, with review, of Seth Green's "An enemy to young trout;" young trout and young white-fish killed by the web of an unknown aquatic larva, probably one of the caddis-flies; habits of the larvæ of *Phryganeidæ*. See No. 1160.
1139. [RILEY, C. V.] "Scab" in apple v. apple-tree plant-lice. <Amer. Ent. and Bot., April, 1870, v. 2, p. 178.
 Notes the freedom of apple-trees in 1870 from the eggs of *Aphis mali*, and the opportunity to test the question of the connection of these insects with the "scab."

1140. [RILEY, C. V.] Insects named. <Amer. Ent. and Bot., April, 1870, v. 2, p. 179.
Answer to inquiry of M. Hobart; identification of several insects; food-plants of *Grapta comma*, *Geometra* [= *Zerene*] *catenaria*, *Serica vespertina*, and *Tetraopes 5-maculatus*; geographical distribution of *Grapta comma*; description of larva of *Eopanteria scribonia*.
1141. [RILEY, C. V.] Supposed trout enemy. <Amer. Ent. and Bot., April, 1870, v. 2, pp. 179-180.
Answer to inquiry of F. Mather; identification of several insects; habits and occurrence of *Capnia minima*; occurrence of *Piophilus casei* and *Ptinus brunneus* at Honeoye Falls, N. Y.
1142. [RILEY, C. V.] Food for trout. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of Seth Green and Collins; with knowledge of the character of the worms which forms a desirable food for young trout, it may be possible to suggest some method of propagating the worms artificially.
1143. [RILEY, C. V.] Hair-snakes. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of E. W. M.; parasitic habits, abodes and prolificacy, and classificatory relations of *Gordius varius* and *G. aquaticus*.
1144. [RILEY, C. V.] Egg-sack of some unknown spider. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of A. Engelmann; figure of egg-sack of *Epeira* sp.?
1145. [RILEY, C. V.] Do worker bees sting the drones to death? <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of M. W. V.; there is no good reason to doubt that worker bees sting the drones to death when the mission of the latter is ended.
1146. [RILEY, C. V.] Red spider. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of R. H. Warder; *Trombidium* [= *Tetranychus*] *telarius* imported from Europe; size, color, and abodes of and means against the same.
1147. [RILEY, C. V.] Insect named. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of M. Barrett; food-habits of *Psocus venosus* and other *Psocidae*.
1148. [RILEY, C. V.] To destroy plant-lice. <Amer. Ent. and Bot., April, 1870, v. 2, p. 180.
Answer to inquiry of B. F. Lazear; means against *Aphididae* on house plants.
1149. [RILEY, C. V.] Raspberry root-gall. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181, fig. 110.
Answer to inquiry of K. Parsons; description and figure of gall of *Rhodites radicum* occurring on roots of *Rosaceae*; genera of parasites raised from it; interest of the question of the manner and extent of parasitization of this gall.
1150. [RILEY, C. V.] Spined slug-worm. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181.
Answer to inquiry of L. G. Saffer and A. R. Bodley; brief description of the larva of *Limacodes* sp.

1151. [RILEY, C. V.] Apple-tree insects. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181.
Answer to inquiry of L. Camfield; identification of specimens and directions for the destruction of *Orgyia leucostigma* and *Phycita nebulo* [= *Acrobasis indiginella*].
1152. [RILEY, C. V.] Native apple-tree bark-lice. <Amer. Ent. and Bot., April, 1870, v. 2, p. 181, fig. 111.
Answer to inquiry of A. C. Hammond; food-plants of and means against *Diaspis harristi* [= *Chionaspis furfurus*]; figure of infested twig of apple; the presence of enemies and parasites prevent this species becoming a formidable pest.
1153. [RILEY, C. V.] The hedge-hog caterpillar. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182, fig. 112.
Answer to inquiry of H. Burt; descriptions and figures of larva and imago of *Arotia* [= *Pyrharctia*] *isabella*; figure of pupa and cocoon; habits and hibernation; its larva and that of *Eopantheria scribonia* called "fever-worm," and ignorantly supposed to cause malarial fevers; food-habits of *Horinus* [= *Merinus*] *lavis*.
1154. [RILEY, C. V.] Chick-weed Geometer. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.
Answer to inquiry of J. Huggins; identification of specimens; reference to account of *Hamatopis grataria*; *Cermatia forceps* common in houses in the latitude of St. Louis, Mo.; the sulphur remedy for canker-worms absurd.
1155. [RILEY, C. V.] Bean-weevil. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.
Answer to inquiry of G. W. Copley; specimens identified; occurrence and ravages of *Bruchus obsoletus* in Illinois.
1156. [RILEY, C. V.] Bag-worm at South Pass, Ill. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.
Answer to inquiry of G. H. Baker; occurrence of *Thyridopteryx ephemera-formis* at South Pass, Ill.; importance of its destruction.
1157. [RILEY, C. V.] Eggs of oblong-winged katy-did. <Amer. Ent. and Bot., April, 1870, v. 2, p. 182.
Answer to inquiry of E. D. Ladd; differences between the eggs of *Phylloptera* [= *Amblycorypha*] *oblongifolia* and those of *Platyphyllum* [= *Cyrtophyllus*] *concavus*; the former occur on currant and various trees.
1158. [RILEY, C. V.] Insects injurious to the grape-vine. No. 8. <Amer. Ent. and Bot., May, 1870, v. 2, pp. 208-209, fig. 127.
Reprint, with slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 61-63, fig. 24.
Treats of *Desmia maculalis*; see No. 1301 for synopsis of contents.
1159. [RILEY, C. V.] The periodical Cicada alias the 17-year and 13-year locust. <Amer. Ent. and Bot., May, 1870, p. 211.
Quotes, from the 1st Ann. Rept. State Ent. Mo., the localities in which *Cicada* [= *Tibicen*] *septendecim* and *C.* [= *T.*] *tredecim* will appear in 1870, with request for reports of the occurrence of these insects.
1160. [RILEY, C. V.] The death-web of young trout. <Amer. Ent. and Bot., May, 1870, v. 2, p. 211.
Supplementary to No. 1138; the larvæ mentioned belong to the genus *Stimulium*.

1161. [RILEY, C. V.] Worms under mulch hay. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.
Answer to inquiry of J. F. Flagg; description, season, habits, and ravages of and means against the larvæ of *Tipula* sp.
1162. [RILEY, C. V.] A new pear-tree insect. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212, fig. 129.
Answer to inquiry of E. J. Ayres; food-habits and ravages of and means against *Platycerus quercus*; figure of imago.
1163. [RILEY, C. V.] Apple-twigg borer. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.
Answer to inquiry of J. B. Myers; *Bostrichus* [= *Amphicerus*] *biscudatus* bores into the axil of limbs of pear-trees.
1164. [RILEY, C. V.] Cocoons of polyphemus moth. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.
Answer to inquiry of H. J. Dunlap; cocoon of *Attacus* [= *Telea*] *polyphemus* found on Morello cherry-tree.
1165. [RILEY, C. V.] Galls on supposed dock. <Amer. Ent. and Bot., May, 1870, v. 2, p. 212.
Answer to inquiry of S. V. Summers; *Gelechia gallæ-solidaginis* forms galls on stems of *Solidago*; *Gastrophysa* [= *Gastroidea*] *cyanea* breeds on *Rumex*.
1166. [RILEY, C. V.] Mossy rose-gall. <Amer. Ent. and Bot., May, 1870, v. 2, p. 213, fig. 130.
Answer to inquiry of W. M. Locke; description of gall, larva, and imago of *Rhodites rosæ*; figure of the gall; description of a parasitic larva.
1167. [RILEY, C. V.] Punctures on the rose-twigg. <Amer. Ent. and Bot., May, 1870, v. 2, p. 213, fig. 131.
Answer to inquiry of G. W. Copley; punctures in rose-stem; eggs, probably of a cricket, imbedded in pith of the same; description of the egg and figure of injured stem.
1168. [RILEY, C. V.] Snout-beetle. <Amer. Ent. and Bot., May, 1870, v. 2, p. 213.
Answer to inquiry of Mary Treat; *Hylebius confusus* a timber borer and usually in pine.
1169. [RILEY, C. V.] The oyster-shell bark-louse in Missouri. <Amer. Ent. and Bot., May, 1870, v. 2, pp. 213-214, fig. 132.
Answer to inquiry of B. P. Hanan; occurrence of *Aspidiotus conchiformis* [= *Mytilaspis pomorum*] in Missouri; importance of the thorough extirpation of the insect; figure of a piece of bark infested by the same.
1170. [RILEY, C. V.] The pod-like willow-gall. <Amer. Ent. and Bot., May, 1870, v. 2, p. 214, fig. 133.
Answer to inquiry of J. R. Muhleman; description and figure of the gall of *Cecidomyia salicis-siliqua*; figure of larva; food-plants, synonymy, and description of the pupa of the same.
1171. [RILEY, C. V.] Bee-nest. <Amer. Ent. and Bot., 1870, v. 2; May, p. 214, fig. 134; September, p. 307.
Answer to inquiry of J. R. Muhleman; description and figure of larva of *Proctosia affinis* in hot, low currant-stem; probability that *Ceratina dupla* breeds twice a year.

1172. [RILEY, C. V.] Beetles named. <Amer. Ent. and Bot., May, 1870, v. 2, p. 214.
Answer to inquiry of S. V. Summers; specimens identified; difference between *Canthon lavis* and *C. chalcites*.
1173. [RILEY, C. V.] Great discovery: Curculio extermination possible! <Amer. Ent. and Bot., June, 1870, v. 2, pp. 225-227.
Notice: <Cultivator and Country Gentleman, 9 June, 1870, v. 35, p. 361.
Reprint of articles by J. E. Chamberlain and Mrs. H. Wier on the destruction of the Curculio; letter from W. B. Ransom; criticism of the same; means against *Conotrachelus nenuphar*; distinctions between *C. nenuphar* and *Anthonomus quadrigibbus*.
1174. [RILEY, C. V.] The death-web of young trout. <Amer. Ent. and Bot., June, 1870, v. 2, pp. 227-228, figs. 143-144.
Value and progress of fish-culture; habits of *Simulium piscicidium*, with the observations of Seth Green and Sara J. McBride; figures larva and pupa of *S. piscicidium* and the imago of *S. molestum*.
1175. [RILEY, C. V.] Insects injurious to the grape-vine. No. 9. <Amer. Ent. and Bot., June, 1870, v. 2, pp. 234-235, fig. 148. Reprint, with slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 65-68, fig. 27.
Treats of *Pterophorus* [= *Oxyptilus*] *periscelidactylus*; see No. 1301 for synopsis of contents.
1176. [RILEY, C. V.] The apple Curculio. <Amer. Ent. and Bot., June, 1870, v. 2, p. 243, fig. 152.
Figures of the imago of *Anthonomus quadrigibbus*.
1177. [RILEY, C. V.] The new Curculio remedy. <Amer. Ent. and Bot., June, 1870, v. 2, p. 243.
Results of experiments in the use of Ransom chip-trap for *Conotrachelus nenuphar*.
1178. [RILEY, C. V.] Tarantula of Texas. <Amer. Ent. and Bot., June, 1870, v. 2, p. 244.
Answer to inquiry of L. J. Stroop; the figure of *Mygale hentzii* given in volume one is somewhat incorrect.
1179. [RILEY, C. V.] Ailanthus silk-worm naturalized. <Amer. Ent. and Bot., June, 1870, v. 2, p. 244.
Answer to inquiry of A. S. Fuller; introduction and naturalization of *Attacus cynthia*.
1180. [RILEY, C. V.] Cypress-gall. <Amer. Ent. and Bot., June, 1870, v. 2, p. 244, fig. 153.
Answer to inquiry of J. P. Stelle; description and figures of gall and description of gall and imago of *Cecidomyia cupressi-ananassa* n. sp. on cypress; figures breast-bone of the larva.
1181. [RILEY, C. V.] Tent-caterpillar of the forest. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.
Answer to the inquiries of A. M. Brown and J. H. Evans; habits, food-plants, and ravages of *Glisiocampa sylvatica* [= *diastria*] and *C. americana*.

1182. [RILEY, C. V.] Worm-boring into peach. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.
 Answer to inquiries of W. C. Flagg, A. C. Hammond, and M. M. Hooton; food-plants and description of larva of *Xylina cinerea* [= *Lithophane antennata*].
1183. [RILEY, C. V.] Insects named. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.
 Answer to inquiry of A. Engelman; descriptions of *Smilia auriculata* and *Membracis ampelopsidis*; both species common on grape-vines.
1184. [RILEY, C. V.] Lice on "snow-balls. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.
 Answer to inquiry of Mrs. C. L. Seymour; means against *Aphididae*.
1185. [RILEY, C. V.] Twig-borer. <Amer. Ent. and Bot., June, 1870, v. 2 p. 245, fig. 154.
 Answer to inquiries of S. H. Kriedelbaugh and G. F. Merriam; figures of male and female *Bostrichus* [= *Amphicerus*] *bicaudatus*, which bore into the axils of grape-buds.
1186. [RILEY, C. V.] Bee enemy. <Amer. Ent. and Bot., June, 1870, v. 2, p. 245.
 Answer to inquiry of F. Brewer; *Staphylinus maculosus*, found eating a bee, is rather a scavenger than an insect of prey.
1187. [RILEY, C. V.] Knots on apple-tree roots caused by root-lice. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of B. N. McKinstry; ravages of and means against *Schizoneura lanigera* on roots of young apple-trees.
1188. [RILEY, C. V.] Beetles named. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of W. W. Daniells; *Ithycerus noveboracensis* injures apple-leaves.
1189. [RILEY, C. V.] Bag-worm. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of M. M. Hooton; occurrence of young larva of *Thyridopteryx ephemeraformis* on peach-trees; manner in which they carry their cases.
1190. [RILEY, C. V.] The larder-beetle. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of S. H. Kriedelbaugh; food-habits and description of the larva and imago of *Dermestes lardarius*.
1191. [RILEY, C. V.] Water-bug. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of W. H. Harrington; habits and description of *Ranatra fusca*.
1192. [RILEY, C. V.] Gregarious worms on horse-chestnut. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of W. R. Howard; oviposition, food-plant, and parasite of *Tortrix* [= *Cacoecia*] *rileyana*.
1193. [RILEY, C. V.] Pupa of the disippus butterfly. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246, fig. 155.
 Answer to inquiry of T. Montgomery; figure and colors of pupa of *Limenitis disippus*; food-plants and hibernations of larva.

1194. [RILEY, C. V.] Prickly-rose gall. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 • Answer to inquiry of J. Cochrane and J. P. Stelle; brief description of the gall of *Rhodites bicolor* on wild rose.
1195. [RILEY, C. V.] Insects feeding on sap of black-walnut. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of M. Barrett; food-habits of *Pisocorus venosus*.
1196. [RILEY, C. V.] Locust-borer. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of "Arbor;" means against *Arkopalus* [= *Cyllene*] *robiniae*.
1197. [RILEY, C. V.] To exterminate cockroaches. <Amer. Ent. and Bot., June, 1870, v. 2, p. 246.
 Answer to inquiry of R. F. Weitbree; means against cockroaches.
1198. [RILEY, C. V.] The white-lined morning Sphinx. (*Deilephila lineata*, Fabr.) <Amer. Ent. and Bot., July-August, 1870, v. 2, pp. 257-258, figs. 162-164. Reprint, with additions and slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 140-142, figs. 60-62.
 Treats of *Deilephila lineata*; see No. 1301 for synopsis of contents.
1199. [RILEY, C. V.] Descriptive entomology. <Amer. Ent. and Bot., July-August, 1870, v. 2, pp. 258-261. Abstract: <Cultivator and Country Gentleman, 6 April, 1871, v. 36, p. 218.
 Critical review of a remark by J. A. Lintner; calculation of the cost, labor, and extent of a work containing the description and figure of every existing species of insect.
1200. [RILEY, C. V.] The tent-caterpillar of the forest. (*Clisiocampa sylvatica*, Harr.) <Amer. Ent. and Bot., July-August, 1870, v. 2, pp. 261-266, figs. 165-168. Reprint, with additions and slight changes: <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 121-129, figs. 52-54.
 Treats of *Clisiocampa sylvatica* [= *disstria*]; see No. 1301 for synopsis of contents.
1201. [RILEY, C. V.] The Ransom Curculio remedy. <Amer. Ent. and Bot., July-August, 1870, v. 2, pp. 268-271.
 Discussion of the efficacy of the Ransom chip-trap against *Conotrachelus nenuphar*; extracts from and criticism of articles by E. S. Hull, W. B. Ransom, and others on this subject.
1202. [RILEY, C. V.] Insects injurious to the grape-vine. No. 10. <Amer. Ent. and Bot., July-August, 1870, v. 2, pp. 272-273, fig. 170. Reprint, with additions and slight changes. <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 68-69, fig. 28.
 Treats of *Spilosoma virginica*; see No. 1301 for synopsis of contents.
1203. [RILEY, C. V.] The Walsh entomological cabinet. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
 Remarks on the purchase and disposal of the entomological collection of B. D. Walsh.

1204. [RILEY, C. V.] The currant-worm! <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
Comments upon the confusing way in which some horticultural publications treat of the currant-worm, without discrimination of species.
1205. [RILEY, C. V.] Water larva. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
Answer to inquiry of F. Mather; habits of the larvæ of *Epheméridæ*.
1206. [RILEY, C. V.] Large black potato-beetles. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
Answer to inquiry of R. S. Elliott; *Epicauta corvina*? injuring potato-vines in Kansas.
1207. [RILEY, C. V.] Destroying cherry plant-lice. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
Answer to inquiry of G. C. Brackett; means against *Myzus cerasi*.
1208. [RILEY, C. V.] Caterpillars on grape-vines. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
Answer to inquiry of G. A. Watson; larvæ of *Alypia octomaculata* and *Acronycta obliquata* found on grape-vines; food-plants of the latter species.
1209. [RILEY, C. V.] Ash-gray blister-beetle. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 275.
Answer to inquiry of P. H. Foster; *Lytta cinerea* [= *Macrobasis unicolor*] feeding on the three-thorned Acacia.
1210. [RILEY, C. V.] Specimens lost. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of C. H. Roberts; food-habits and description of larva of *Gortyna nitela* and of an undetermined moth on peach-trees.
1211. [RILEY, C. V.] White willow worm. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of S. H. K.; food-plants and description of larva of and means against *Nematus ventralis*.
1212. [RILEY, C. V.] Bark-lice on grape-vine and raspberry saw-fly. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of S. Thompson; *Lecanium* [= *Pulvinaria*] *vitis* common on grape-vines in Europe and North America; its oviposition and occurrence in Illinois; description and means against the larva of *Selandria* [= *Monophadnus*] *rubi*.
1213. [RILEY, C. V.] Apple-tree borer; variations in the two-striped Saperda. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of D. B. Wier; colorational variations in *Saperda bivittata* [= *candida*]; abundance and ravages of *Caprus oblineatus* [= *Lygus pratensis*].
1214. [RILEY, C. V.] The plum Curculio breeds in apple. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer inquiry of E. Leming; *Conotrachelus nenuphar* breeds in the fruit of apple.

1215. [RILEY, C. V.] Cecropia worm. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of J. F. Thompson; occurrence and ravages of the larva of *Attacus cecropia* on apple-trees.
1216. [RILEY, C. V.] Gigantic rhinoceros beetle. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of L. G. Saffer; variations in coloration of *Dynastes tityus*.
1217. [RILEY, C. V.] Roman-nosed pupa. <Amer. Ent. and Bot., July-August, 1870, v. 2, p. 276.
Answer to inquiry of E. D. Van Winkle; food-habits of *Limenitis urcula* and *L. disippus*; the pupæ of the two species are alike.
1218. [RILEY, C. V.] The onward march of the Colorado potato-beetle. A word to our Canadian neighbors.. <Amer. Ent. and Bot., September, 1870, v. 2, pp. 289-291, fig. 181.
Remarks on the spread of *Doryphora decemlineata* into Ontario, and means of checking it; efficacy and proper use of Paris green; other remedies; *Lebia grandis* a natural enemy of the larvæ.
1219. [RILEY, C. V.] The tarnished plant-bug. (*Capsus oblineatus*, Say). <Amer. Ent. and Bot., September, 1870, v. 2, pp. 291-293, fig. 182. Reprinted, with additions and slight changes, from <2d Ann. Rept. State Ent. Mo., March, 1870, pp. 113-115, fig. 83.
Treats of *Capsus oblineatus* [= *Lygus pratensis*]; see No. 1127 for synopsis of contents.
1220. [RILEY, C. V.] Osage orange for the mulberry silk-worm. <Amer. Ent. and Bot., September, 1870, v. 2, p. 293.
Reprint and critical review of S. Cornaby's article on the above; important articles should not be published anonymously.
1221. [RILEY, C. V.] Insects injurious to the grape-vine. No. 11. <Amer. Ent. and Bot., September, 1870, v. 2, p. 295, fig. 185. Reprint with slight changes. <3d Ann. Rept. State Ent. Mo., April, 1871, pp. 77-79, fig. 34.
Treats of *Pelidnota punctata*; see No. 1301 for synopsis of contents.
1222. [RILEY, C. V.] The slug on pear and cherry trees. <Amer. Ent. and Bot., September, 1870, v. 2, p. 296.
Reprint and critical review of "Addi" on the above; ravages of and means against *Selandria* [= *Eriocampa*] *cerasi*.
1223. [RILEY, C. V.] Appendix to joint-worm article published in vol. 1, No. 8 <Amer. Ent. and Bot., September, 1870, v. 2, pp. 296-297.
Introduction to and explanation of the preparation and publication of Walsh's *Eurytomides*. See No. 384.
1224. [RILEY, C. V.] Entomology indeed run mad! <Amer. Ent. and Bot., September, 1870, v. 2, p. 305.
Critical review of Mark Miller's article on the currant-worm; *Nematus ventricosus* [= *ribesii*] confounded with *Eufithia ribearia*.
1225. [RILEY, C. V.] Red spider. <Amer. Ent. and Bot., September, 1870, v. 2, p. 305.
Ravages and transformations of *Tetranychus telarius*.

1226. [RILEY, C. V.] Insects named. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306.
 Answer to inquiry of J. K. Kidd; food-habits of *Silpha peltata* [= *americana*] and allied forms, of *Calosoma scrutator* and of *Laphria* [= *Dasyllis*] *thoracica*; mimicry between *Laphria* and *Bombus* and its use.
1227. [RILEY, C. V.] Caterpillar of white-marked tussock moth. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306, fig. 186.
 Answer to inquiry of G. C. Brackett; figure of larva and description of imago of *Orgyia leucostigma*; posture of male in repose; habits of female; *Saperda bivittata* [= *candida*] usually perishes if it has not changed to a pupa before the death of the tree; *Chrysobothris femorata* lives for weeks on dead wood.
1228. [RILEY, C. V.] Does the apple Curculio go underground to transform? <Amer. Ent. and Bot., September, 1870, v. 2, p. 306.
 Answer to inquiry of W. Muir; *Anthonomus quadrigibbus* transforms within the fruit; it does not attack stone fruit.
1229. [RILEY, C. V.] Walnut caterpillars. <Amer. Ent. and Bot., September, 1870, v. 2, p. 306.
 Answer to inquiry of G. M. Levette; seasons, habits, and food-plant of and means against *Datana ministra*; description of larva.
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1301. RILEY, C. V. Third annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the State. <6th Ann. Rept. State Board of Agric. for 1870, April, 1871, pp. 176+7, 73 figs. Separate: Jefferson City, Mo., April, 1871, pp. 176+7, 73 figs.

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1304. RILEY, C. V. Canker-worms; not army-worms. <Moore's Rural New Yorker, 24 June, 1871, v. 23, p. 393.

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* Extract in <Sci. Amer., 25 May, 1872, v. 25, p. 351.

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1312. RILEY, C. V. Thomas Wier's apple-worm trap. <Amer. Agric., April, 1872, v. 31, pp. 142-143, 1 fig.
 Description and figure of Wier's apple-worm trap.
1313. [RILEY, C. V.] Remarkable parasitic fungus. <Sci. Amer., 25 May, 1872 [v. 40], n. s., v. 26, p. 347.
 Description and figure of unidentified fungus infesting the larva of the white grub, *Lachnosterna fusca*.
1314. RILEY, C. V. Cut-worm lion. <Colman's Rural World, 15 June, 1872, fig. S.-b. No. 5, p. 47.
 History of the larva and imago of *Calosoma calidum*, an enemy to cut-worms.
1315. RILEY, C. V. Cut-worms. <Cultivator and Country Gentleman, 20 June, 1872, v. 37, p. 392.
 Dandelions and other weeds furnish food for young cut-worms which hatch in the fall; land should be kept clear of weeds at that season.
1316. RILEY, C. V. Flat-headed apple tree-borer in horse chestnut. <Colman's Rural World, 22 June, 1872, fig. S.-b. No. 5, p. 47.
 Answer to inquiry of S. S. R.; natural history of larva and imago of *Chrysobothris femorata*.
1317. RILEY, C. V. A new insect. <Western Planter, 29 June, 1872. S.-b. No. 5, p. 49.
 Answer to inquiry of F. Halsinger; *Nysius* n. sp., very destructive to potatoes.
1318. RILEY, C. V. Codling-moth; jarring down infested fruit. <Cultivator and Country Gentleman, 4 July, 1872, v. 37, p. 422.
 Excrement outside of the fruit indicates the exit of the worm, with some varieties; with others the worm may be often found after the excrements are visible.

1319. RILEY, C. V. Food for silkworms. <Colman's Rural World, 13 July, 1872. S.-b. No. 5, p. 40.
Osage orange superior to red-mulberry.
1320. RILEY, C. V. The apple maggot-fly, *Trypeta pomonella* Walsh. <Amer. Agric., July, 1872, v. 31, pp. 263-264, 2 figs.
Answer to letter of J. H. Spatter; comparative descriptions and figures of larvæ, pupæ, and imagoes of *Trypeta pomonella* and *Carpocapsa pomonella*; figures showing injuries of both species; distribution and means against *Trypeta pomonella*.
1321. RILEY, C. V. Worms on Dutchman's pipe. <Colman's Rural World, 3 August, 1872, fig. S.-b. No. 5, p. 136.
Answer to inquiry of J. T. C.; life-history of *Papilio philenor*.
1322. RILEY, C. V. Apple-leaf worm. The apple-leaf skeletonizer. <Colman's Rural World, 10 August, 1872, fig. S.-b. No. 5, p. 138.
Answer to inquiry of L. R. Bryant; habits and times of appearance of *Pempelia hammondi*.
1323. RILEY, C. V. Eggs in grape-canec and apple-twigc. <Amer. Agric., August, 1872, v. 31, p. 302, figs. 1-7.
Figures of eggc and of twigc punctured by *Orocharis saltator*, *Ecanthus niveu*, and *Ceresa bubalu*; figurec imagoes of the same; habitc, descriptionc of eggc, and imagoes of the three species.
1324. RILEY, C. V. Borerc in evergreencc. <Gardener's Mo. and Hortic., December, 1872, v. 14, p. 373.
Larvæ of *Monohammu titillator* the worst enemy of the white-pine; another species of *Cerambycidæ* injuriouc to red-cedarc; a host of bark-borerc affect all kindc of evergreencc.
1325. RILEY, C. V. Einige unscrer schädlicherer Insekten. <St. Louis, Mo., 1872, p. 35, il. S.-b. No. 19, pp. 174-190.
Causec of the decadence of viticulture in the United Statec; habitc, ravagcc, specific identity, and figurec of several stagec of the leaf-inhabiting and root-inhabiting formc of *Phylloxera vastatrix*; identity of the European and American grape *Phylloxera*; susceptibility of the different species of grape to the attackc of the same; principal manifestationc of attack; preventive and remedial measurec; description and figurec of *Conotrachelu ænosphar*; habitc, ravagcc, parasitec, enemyc, and meanc against it; description of Ransom's trap, Hull's, Ward's, and Hooten's machinec for capturing the imagoes; figurec of the machinec. Natural history, food-plante, distribution, enemyc, parasitec, and meanc against *Doryphora decemlineata*; figurec of all stagec of the same; use of Paris green and other powderc; mechanical devicec for collecting the insectc.
1326. RILEY, C. V. Harvest mitec. <Amer. Nat., January, 1873, v. 7, pp. 16-19, fig. 5. Extract: <Colman's Rural World, 21 June, 1876, 2 figc. S.-b. No. 10, pp. 170, 171.
List of insect parasitec on man; description, figurec, habitc of and meanc against *Leptu* [= *Tetranychu*] *americanu* n. sp. and *L.* [= *T.*] *irritanu* n. sp.
1327. RILEY, C. V. *Vanessa antiopa*. <Ent. Mo. Mag., January, 1873, v. 9, p. 195.
Habitc and food-plante of *Vanessa antiopa*.

1328. RILEY, C. V. Entomological correction. <Cultivator and Country Gentleman, 6 March, 1873, v. 38, p. 149.

Lema trilineata does not occur in southwestern Missouri, as stated by W. R. Howard.

1329. RILEY, C. V. Fifth annual report on the noxious, beneficial, and other insects of the State of Missouri, made to the State Board of Agriculture, pursuant to an appropriation for this purpose from the legislature of the State. <8th Ann. Rept. State Board of Agric. for 1872, 18 April, 1873, pp. 160+8, 75 figs. Separate: <Jefferson City, Mo., 18 April, 1873, pp. 160+8, 75 figs. Review by A. S. Packard, jr.: <Amer. Nat., August, 1873, v. 7, pp. 471-477, figs. 115-130. Reply to Packard and rejoinder by Packard: <Amer. Nat., March, 1874, v. 8, pp. 181-188.

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NOTE.—Pages 1-44 were also printed as a separate, with title-page cover.
 <Jefferson City, Mo., 1873. S.-b. No. 19, pp. 150-173.

1330. RILEY, C. V. New York without a State entomologist. <Moore's Rural New Yorker, 5 May, 1873. S.-b. No. 8, p. 103.

Needs of a State entomologist for New York; *Salix humilis* infested with larva of *Plectrodera scalator*.

1331. RILEY, C. V. Tent-caterpillar of the forest. <N. Y. Tribune, 23 May, 1873. S.-b. No. 8, pp. 64-65.

Answer to inquiry of S. T. Gilbert; means against eggs of *Clisiocampa sylvatica* [= *disstrata*].

1332. RILEY, C. V. Apple-tree borer. <N. Y. Tribune, 23 May, 1873, S.-b. No. 8, p. 64.

Answer to inquiry of J. Durbin; means against *Saperda biottata* [= *candida*].

1333. RILEY, C. V. Punctured grape-canes. <N. Y. Tribune, 23 May, 1873. S.-b. No. 8, p. 64.

Answer to inquiry of E. Snyder; food-habits and means against *Ecanthus niveus*.

1334. RILEY, C. V. The codling-moth. Weir's trap. <Amer. Agric., May, 1873, v. 32, p. 184, figs.

Unsatisfactory results of experiments with the Weir trap; relative value of materials used; criticism of J. S. Parker's theory for the extermination of *Carpocapsa pomonella*; this species breeds in apples, wild crabs, pears, peaches, and plums; figures females and the abdomen of the males of *Pimpla annulipes* and *Macrocentrus delicatus* parasitic upon the apple-worm.

1335. RILEY, C. V. Influence of extreme cold on the Curculio. <Gardener's Mo. and Hortie., May, 1873, v. 15, pp. 137-139.

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1364. RILEY, C. V. The Colorado potato-beetle abroad. <N. Y. Tribune, 1 April, 1874. S.-b. No. 10, p. 37.

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1365. RILEY, C. V. Cabbage-lice. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, pp. 33-34.

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1366. RILEY, C. V. Peach-borers. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, p. 34.

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1367. RILEY, C. V. Apply soap. <N. Y. Tribune, 8 April, 1874. S.-b. No. 10, p. 34.

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1369. RILEY, C. V. A remedy for the cotton-worm. <N. Y. Tribune, 22 April, 1874. S.-b. No. 10, pp. 25-26. Reprint: <Vicksburg Herald, 1 May, 1874.

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1372. RILEY, C. V. The plum Curculio; natural history and how to catch him. <N. Y. Semi-weekly Tribune, 1 May, 1874. S.-b. No. 10, pp. 18-19; 38-40. Extract: <Cultivator and Country Gentleman, 14 May, 1874, v. 39, p. 310. <New England Farmer, 18 July, 1874, [v. 53,] n. s., v. 29, p. 1. See; <Indust. Record, 5 February, 1875. S.-b. No. 16, pp. 46-48.

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1373. RILEY, C. V. The apple-worm; natural history; remedies. <N. Y. Tribune, 20 May, 1874. S.-b. No. 10, pp. 8-9; 37-38.

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1483. RILEY, U. V. Is the Colorado potato-beetle poisonous? <Colman's Rural World, 7 June, 1876. S.-b. No. 10, pp. 164-165.

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Description of the seeds (of an unknown plant) which are inhabited by the larvæ of *Carpocapsa saltitans*; manner in which these larvæ cause the seeds to roll and jump; habits of larva within the seed; description of the plant bearing the seeds; the seed of *Tamariscus* moved by the larva of *Nanodes tamarisci*, which feeds within it; description of the gall of *Cynips* [= *Neuroterus*] *quercus-saltatorius* and of the jumping of these galls.

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Answer to letter of W. Snowden; characters and habits of *Cassidea*; description and figures of larvæ and imago of *Coptocycla* [= *Cassida*] *bivittata* and *C.* [= *C.*] *nigripes*; descriptions of *C. aurichalcea* and *C. guttata*; these species feed on leaves of *Ipomœa batatas* and *C. aurichalcea*, also on leaves of *Convolvulus* and of *Solanum dulcamara*; means against them.
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1531. [RILEY, C. V.] Grape-leaf gall. <Colman's Rural World, 20 September, 1876. S.-b. No. 14, p. 3.
Answer to letter of A. A. Briggs; *Phylloxera vastatrix* does comparatively little damage on the leaves of grape-vines; Clifton and Taylor vines peculiarly subject to the attacks of the leaf-inhabiting form; Concord vines seldom attacked by it and not seriously injured by the root-inhabiting form; means against the leaf-inhabiting form.
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1533. RILEY, C. V. Cecropia worm on elder. <Colman's Rural World, 27 September, 1876, 1 fig. S.-b. No. 14, p. 63.
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1535. [RILEY, C. V.] Butterfly chrysalis. <N. Y. Tribune, 13 October, 1876. S.-b. No. 19, p. 224. Reprint: <N. Y. Tribune, 21 October, 1876. S.-b. No. 10, p. 223.
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Verification of predictions in regard to the limitation of the ravages of *Caloptenus spretus* in western Missouri in 1876; gathering eggs, ditching, rolling, and burning recommended as means against them; recommends the employment of soldiers, of hogs, and of poultry, late planting, and the destruction of the locusts in their native country; *Blissus leucopterus* more

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1539. [RILEY, C. V.] Canker-worms at the West. <N. Y. Tribune, 31 October, 1876. S.-b. No. 17, p. 59.

Occurrence of *Palearcta vernata* in Michigan in 1872 and in Ohio in 1874, 1875, and 1876; brief account of *P. vernata* and *Anisopteryx pomataria*; their habits, ravages, and means against them.

1540. RILEY, C. V. [The venation of *Anisopteryx* and variation in imagos.] <Ca. Ent., September [October], 1876, v. 8, pp. 178-179.

Variation in the venation of the wings of *Anisopteryx pomataria* and in the imagos of so-called species.

1541. RILEY, C. V. A new enemy of the grasshopper. <Lawrence [Kans.] Journal. Reprint: <Industrialist [Manhattan, Kans.], 2 November, 1876, v. 2, No. 30, p. 2. S.-b. No. 10, pp. 209-210.

Letter of F. H. Snow with comments; eggs of *Caloptenus spretus* destroyed by larvæ of *Anthomyia caloptent* [= *angustifrons*]; characters of the larvæ; eggs destroyed by larvæ of some *Ichneumon*? [= *Systoechus oreas*]; need of destroying eggs by artificial means.

1542. RILEY, C. V. Silk culture in Kansas. <Nationalist, 10 November, 1876. S.-b. No. 14, p. 1.

Importance of silk culture; practicability of the culture and prospects of its increase in the United States; measures for its promotion in Kansas; successful raising of silk worms on osage orange [*Maclura aurantiaca*].

1543. RILEY, C. V. Bee killers: *Asilus* flies. <N. Y. Weekly Sun, 15 November, 1876. S.-b. No. 10, p. 201.

Habits of *Asilidæ*, especially of *Trupanea* [= *Promachus*] *apivora* and *Asilus missouriensis* [= *Proctacanthus milberti*]; description of *T.* [= *P.*] *apivora*; larva of *Asilus sericeus* feeds on roots of *Rheum rhaponticum*.

1544. RILEY, C. V. How to use Paris green for the cotton-worm. <Colman's Rural World, 15 November, 1876. S.-b. No. 10, pp. 210-211. See: <N. Y. Tribune, 15 December, 1876. S.-b. No. 14, p. 7.

Answer to letter of C. W. Niver; directions for the use of Paris green by the dry and wet method; description of sprinkling machines.

1545. [RILEY, C. V.] *Notodonta concinna*. <Colman's Rural World, 15 November, 1876. S.-b. No. 10, p. 219.

Answer to letter of J. Barritt; description of larva of *Notodonta* [= *Ædemia*] *concinna*; habits, food-plants, and means against the same.

1546. [RILEY, C. V.] The dog-day harvest-fly. <Colman's Rural World, 15 November, 1876. S.-b. No. 10, p. 220.

Answer to inquiry of C. A. U.; description of *Cicada pruinosa* [= *tibicen*]; method of sonification; habits; notice of some manuals of entomology.

1547. [RILEY, C. V.] Snake-worms. <Colman's Rural World, 15 November, 1876. S.-b. No. p. 10, p. 220.

Answer to letter of J. Armstrong; description of larvæ of *Sciara* sp.; their habit of moving in congregations; their abode and enemies.

1548. RILEY, C. V. Locust eggs. <Colman's Rural World, 15 November, 1876. S.-b. No. 10, p. 223.

Answer to letter of C. T.; female *Acrididæ* lay more than one litter of eggs; the occurrence of egg-like parasites in males has led to the supposition that the males bore eggs.

1549. RILEY, C. V. Locust flights east of the Mississippi. <Colman's Rural World, 22 November, 1876. S.-b. No. 10, pp. 211-212; 221-222; 223-225. Reprint: <Sci. Amer., 16 December, 1876 [v. 49], n. s., v. 35, p. 392, 2 figs. S.-b. No. 10, pp. 216, 217. <Trans. Kans. Acad. Sci., 1877, v. 5, pp. 62-64.

Limitation of plants and animals to certain geographical regions; regions in which alone *Caloptenus spretus* survives; species confounded with *C. spretus*; occurrence of swarms of *Acridium americanum* in Ohio; description, geographical distribution, and ravages of the same; swarms of *Caloptenus differentialis*, *C. atlantis*, and *C. femur-rubrum* in Illinois; ravages of the same. The reprint in the Sci. Amer. contains figures of *Caloptenus spretus* and *Acridium americanum*.

1550. RILEY, C. V. Locusts again. <N. Y. Tribune, 22 November, 1876. S.-b. No. 10, p. 222.

Effects of winter on the vitality of the eggs of *Acrididæ*.

1551. RILEY, C. V. The army-worm; its natural history complete. <Sci. Amer., 9 December, 1876 [v. 49], n. s., v. 35, p. 372, 4 figs. S.-b. No. 10, pp. 217-219. Reprint, with slight changes: <Proc. Amer. Assoc. Adv. Sci. for 1876, 1877, v. 25, pp. 279-283, 2 figs.

Geographical distribution of *Leucania unipuncta*; figures of all stages and of ovipositor of female; place and manner of oviposition; description of eggs and young larvæ; number of annual broods; summary of the natural history of this species.

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1650. RILEY, C. V.—Continued.

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NOTE.—Nos. 1651–1653 and 1668–1669 were reprinted from Proc. Amer. Assoc. Adv. Sci., v. 27, under a separate cover. Salem, February, 1879.

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1656. [RILEY, C. V.] Inquiring friends. <N. Y. Tribune, 9 October, 1878. S.-b. No. 19, p. 245.

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1657. RILEY, C. V. Notes from the South. Facts about the cotton-worm. <Sci. Amer., 16 November, 1878 [v. 53], n. s., v. 39, pp. 312-313. S.-b. No. 19, pp. 213-214; 239-241. See: <Amer. Rural Home, 27 September, 1878. S.-b. No. 23, p. 128.
Note of a trip in the southern United States in 1878; commission to investigate insects injurious to the cotton-plant; food-plants and habits of the larva and imago of *Aletia argillacea* [= *xylina*]; use of poisonous baits and of Paris green; *Anomis exalta* injurious in certain regions.
1658. RILEY, C. V. Some further facts regarding that "fatherless race." <Sci. Amer. Suppl., 30 November, 1878. S.-b. No. 19, pp. 238-239.
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1659. [RILEY, C. V.] "The carpet bug." <N. Y. Tribune, 1 December, 1878. S.-b. No. 19, p. 236.
Ravages of and means against *Anthrenus scrophulariæ*; figures larva, pupa and imago.
1660. [RILEY, C. V.] A bug that eats bees. <N. Y. Tribune, 4 December, 1878. S.-b. No. 19, p. 237. Reprint: <Prairie Farmer, 4 January, 1879, v. 50, p. 3. S.-b. No. 23, p. 110.
Description and habits of *Phymata erosa*.
1661. [RILEY, C. V.] Tomato worm. <N. Y. Tribune, 4 December, 1878. S.-b. No. 19, p. 237.
Excessive abundance of larva of *Sphinx quinquemaculata* [= *Protoparce celsus*] near Port Hope, Ontario, in 1878.
1662. [RILEY, C. V.] Worm snake. <N. Y. Tribune, 4 December, 1878. S.-b. No. 19, p. 237.
Habits and abode of larvæ of *Sciara* sp. at Orange, Conn.
1663. [RILEY, C. V.] Carpet pests. <N. Y. Tribune, 4 December, 1878. S.-b. No. 19, p. 237.
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1664. RILEY, C. V. Corn worm. <N. Y. Tribune, 4 December, 1878. S.-b. No. 19, pp. 235; 237.
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1666. [RILEY, C. V.] Apple-worm. <N. Y. Tribune, 4 December, 1878. S.-b. No. 19, pp. 235; 237.
Baldwin apples more exempt than other varieties from the attacks of the second brood of *Carpocapsa pomonella*.
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Value of *Passer domesticus* as a destroyer of insects and in other respects; objections to the special protection of the same.

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1672. RILEY, C. V. Potato-bug. <Johnson's New Universal Cyclopædia, 1878, v. 3, pp. 1361-1364, 9 figs. S.-b. No. 10, pp. 195-198. List of principal enemies of potato-plant; spread, natural history, food-plants, enemies of, and means against *Doryphora decemlineata*; figures of the same in its different stages, and of *Lydella* [= *Exorista*] *doryphoræ*, *Calosoma calidum*, *Hippodamia convergens*, *Mysia* [= *Anatis*] *15-punctata*, *Arma* [= *Podisus*] *spinosus*, *Harpactor* [= *Milyas*] *cinctus*, *Perillus circumcinctus*, and *Doryphora juncta*.
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1674. RILEY, C. V. The locust swarms that devastate the trans-Mississippi country; their source, movements, and eastern limit. <Western Farmer's Almanac for 1879, 1878, pp. 48-50. S.-b. No. 19, pp. 247-248.

Limits of the breeding-grounds of and of regions invaded by *Caloptenus spretus*; causes, periods, and directions of their flights; causes of the limitations of the same physical and principally atmospheric; amount of ravages.

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From St. Louis [Mo.] Globe-Democrat. List of some birds which are beneficial to horticulture and some which are noxious.

1676. RILEY, C. V. Letter from Prof. C. V. Riley. <Colman's Rural World, 15 January, 1879. S.-b. No. 23, pp. 107-108.

Letter to N. J. Colman transmitting report as former treasurer of the Missouri State Horticultural Society; transmission of documents for distribution; proposal for a revised and condensed edition of author's reports as State entomologist of Missouri.

1677. [RILEY, C. V.] Michigan apples and codling-moth. <N. Y. Tribune, 15 January, 1879. S.-b. No. 23, p. 109.

Freedom of apples from *Carpocapsa pomonella* in 1878 in Michigan due to the smallness of the apple crop in 1877 and to the efforts made by the orchardists to exterminate the insects.

1678. RILEY, C. V. Notes on the *Aphididae* of the United States, with descriptions of species occurring west of the Mississippi. <Bull. U. S. Geol. and Geog. Surv. Terr., 28 February, 1879, v. 5, pp. 1-32, pl. 1-2, with 2 pp. expl. of pl. Separate: <Washington, 22 January, 1879, 32 pp., 2 pl., with 2 pp. expl. of pl. Abstract: <Sci. News, 15 April, 1879, v. 1, pp. 184-186.

Part 1, pp. 1-17, by C. V. Riley, entitled "Biological notes on the *Pemphiginae*, with descriptions of new species;" history and description of *Schizoneura americana* n. sp. [p. 4], *Colopha ulmicola*, *Pemphigus populi-monilis* n. sp. [p. 13], *P. populi-transversus* n. sp. [p. 15], *P. p.-ramulorum* n. sp. [p. 16], *P. acerifolii* n. sp. [p. 16], *P. fraxinifolii* n. sp. [p. 17], and *Hormaphis spinosus*.

Part 2, pp. 18-32, by J. Monell, entitled "Notes on *Aphidinae*, with descriptions of new species." Describes nine (9) new species of *Siphonophora*, five (5) of *Aphis*, two (2) of *Rhopalosiphum*, nine (9) of *Callipterus*, three (3) of *Chaitophorus*; description of other species of these genera and of *Drepanosiphum* and the genera above named; synoptic tables of some of the species.

1679. [RILEY, C. V.] [Plant-lice on potatoes.] <N. Y. Tribune, 12 February, 1879. S.-b. No. 23, p. 109.

Aphididae reputed injurious to potato plants, probably *Aphis solani*.

1680. RILEY, C. V. Missouri entomological reports. <Colman's Rural World, 19 February, 1879. S.-b. No. 23, p. 102.

Proposal for republication of the reports of the State entomologist of Missouri; reasons for the non-publication of a tenth report; sketch of what that report would have contained.

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Figures of all stages, ravages, natural history, and means against *Blissus leucopterus*; its method of hibernation, and the effect of weather upon it.
1682. RILEY, C. V. Notes on the apple-worm. <Colman's Rural World, 5 March, 1879. S.-b. No. 23, p. 102. Reprint with slight changes: <Amer. Nat., August [July], 1879, v. 13, pp. 523-524. <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 238-239.
See No. 1721 for synopsis of contents.
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Figures larva, pupa, and imago of *Calandra oryzae* and imago of *C. granaria*; habits, ravages, and means against the same; description of egg and method of oviposition of *C. oryzae*; use of carbon bisulphide against these insects; poisonous effects of eating the comminuted beetles.
1684. RILEY, C. V. [Letter to W. G. Le Duc.] <Boston Daily Herald, 4 April, 1879. <Psyche Advertiser, 11 April, 1879, v. 2, p. 9. <Ent. Nach., 1 July, 1879, jahrg. 5, p. 177.
The reason for which the author resigned as entomologist of the U. S. Department of Agriculture was not ill-health.
1685. RILEY, C. V. Preventing rot in plums. <N. Y. Tribune, 9 April, 1879. S.-b. No. 23, p. 110; 129.
Trapping and jarring recommended as a means against *Conotrachelus nemophar*.
1686. [RILEY, C. V.] A new insect pest. <Colorado Farmer, 10 April, 1879, v. 12, No. 15, p. 6. S.-b. No. 23, p. 108.
Injury to orchards and ornamental trees in California by *Dorthesia* [*characias*?], introduced from Australia; ravages of *D. characias* in southern Africa; prospective ravages in California; means against it.
1687. RILEY, C. V. The nervous system and salivary glands of *Phylloxera*. <Psyche, 11 April, 1879, v. 2, pp. 225-226.
Correctness of E. L. Mark's conclusion that the author had mistaken nerve cords for tracheæ; dissent from M. Cornu's view that the root swellings caused by *Phylloxera* are due to mechanical action of the puncture and the subsequent absorption of liquids; swelling considered to be caused by the introduction of a salivary secretion.
1688. RILEY, C. V. Mr. Henderson's experiments. <Gardener's Mo. and Hortic., April, 1879, v. 21, pp. 120-121. S.-b. No. 23, p. 107.
Review of P. Henderson's "Carnivorous plants;" believes that *Dionæa* and *Drosera* are nourished by the insects digested by their leaves.
1689. RILEY, C. V. The migrations and hibernation of *Aletia argillacea*. <Washington [D. C.] World, 10 May, 1879. <Science News, 1 June, 1879, v. 1, pp. 230-232. S.-b. No. 23, pp. 119-120. <Sci. Amer., 14 June, 1879 [v. 54], n. s., v. 40, p. 375. <Galveston [Tex.] Daily News, 24 October, 1879, v. 38, p. 2.

1689. RILEY, C. V.—Continued.

S.-b. No. 23, pp. 166–167, No. 42, pp. 38–39. Abstract: <Amer. Nat., November [25 October], 1879, v. 13, p. 726. <Farmer's Review, September, 1879. S.-b. No. 23, p. 108.

Ravages of insects, particularly of *Aletia argillacea* [= *xylina*] in the United States; hibernation theories; author's belief in the probable hibernation of the moth in the southern parts of the cotton belt; species mistaken for *Aletia*; description and food-plants of *Aspila virescens*.

1690. RILEY, C. V. Insects affecting clover. <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 90; 97; 129.

Habits, ravages of and means against *Hylesinus trifolii* and *Cecidomyia leguminicola*; prior observations upon the same; characters distinguishing *C. leguminicola* from *C.* [= *Diplosis*] *tritici* and *C. destructor*.

1691. RILEY, C. V. [*Ecanthus niveus*.] <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 95; 98.

Occurrence of eggs of *Ecanthus niveus* in twigs of apple, raspberry, grape, and other plants; slight injuries to be expected from the same; means against them.

1692. [RILEY, C. V.] Insect powders and their use. <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 95; 96; 130–131.

Abstract of W. Saunders' "Insect powder," with additions; differences between Persian and Dalmatian insect powder; methods of using them against insects.

1693. [RILEY, C. V.] The grasshopper prospect. <N. Y. Tribune, 14 May, 1879. S.-b. No. 23, p. 98.

Prospect of injuries by *Caloptenus spretus* in 1879; a new species injurious in the Sierra Valley of California.

1694. RILEY, C. V. The westward progress of the imported cabbage-worm. <Amer. Nat., June [20 May], 1879, v. 13, p. 393. See: <Colorado Farmer, 10 April, 1879. S.-b. No. 23, p. 108. <Farmer's Review, April, 1879. S.-b. No. 22, p. 64. <Colman's Rural World, 1879. S.-b. No. 23, p. 108. <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, p. 239. Spread of *Pieris rapæ* into Illinois and Missouri; means against the same.

1695. [RILEY, C. V.] Lures for moths. <N. Y. Tribune, 28 May, 1879. S.-b. No. 23, p. 95.

Trapping *Carpocapsa pomonella* in shallow dishes of sweetened liquid more harmful than beneficial, as many useful insects are destroyed; the method serviceable against *Heliothis armigera*.

1696. [RILEY, C. V.] The currant-worm. <N. Y. Tribune, 11 June, 1879. S.-b. No. 23, p. 106.

Description, habits, distribution, and spread of and means against *Nematus ventricosus* [= *ribesii*]; methods of using hellebore.

1697. [RILEY, C. V.] Sweet-potato beetle. <N. Y. Tribune, 11 June, 1879. S.-b. No. 23, pp. 106–107; 131.

Description of all stages, habits, food plants, and means against *Coptocycla* [= *Cassida*] *nigripes*.

1698. RILEY, C. V. [The seventeen-year Cicada.] <N. Y. Tribune, 1879. Reprint: <Colman's Rural World, 25 June, 1879. S.-b. No. 23, p. 152.
Boundaries of the areas in which *Cicada* [= *Tibicen*] *septendecim* is expected to occur in 1879; request for information of its appearance.
1699. RILEY, C. V. The imported carpet-beetle, *Anthrenus scrophulariæ*, L. <Farmer's Review, 1879, fig. S.-b. No. 23, pp. 96-98. Extract: <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, p. 54. Letter of J. H. Parsons, with answer; description of larva and imago of *Anthrenus scrophulariæ*; its history, habits, ravages, and means against them; figures larva, pupa, and imago.
1700. [RILEY, C. V.] The cheese-skipper. <N. Y. Tribune, 2 July, 1879. S.-b. No. 23, p. 93. Notice: <Farmer's Review, 7 September, 1879. S.-b. No. 23, p. 103.
Description of larva, pupa, and imago, habits and means against *Piophilæ casei*.
1701. RILEY, C. V. The thick-thighed walking-stick. <Sci. Amer., 5 July, 1879 [v. 55], n. s., v. 41, pp. 7-8, fig. S.-b. No. 23, p. 121. Reprint, with slight changes: <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 241-245, pl. 3. Treats of *Diapheromera femorata*. See No. 1721 for synopsis of contents.
1702. RILEY, C. V. The cotton-worm. <Mobile Register, 9 July, 1879. S.-b. No. 68, p. 204. See: <Colorado Citizen, 17 July, 1879. S.-b. No. 23, p. 91. <Galveston News, 19 July, 1879. S.-b. No. 23, p. 93.
Remarks at the Cotton Exchange about prospective injuries from *Aletia argillacea* [= *xyliæ*]; sudden appearance and means against the same; more injurious in wet than dry weather.
1703. RILEY, C. V. Other insects affecting cheese. <N. Y. Tribune, 9 July, 1879. S.-b. No. 23, p. 92. Reprint: <Amer. Dairyman. <Western Rural, 9 August, 1879, v. 17, No. 32, p. 250. S.-b. No. 23, p. 92.
Habits and transformations of *Tyroglyphus siro*, *Corynetes* [= *Necrobia*] *rufipes*, and *Dermestes lardarius*; tenacity of life of the *Tyroglyphus* and assumption of *Hypopus* form by the same; anecdote of Latreille; injury done in cheese by *Musca corvina*.
1704. RILEY, C. V. Pupation of the *Nymphalidæ*. Abstract: <Psyche, 11 July, 1879, v. 2, pp. 249-251.
Notice of prevalent explanations of the manner in which suspended pupa of Lepidoptera support themselves while shedding the larval skin; explanation of the process in *Vanessa antiopa* and *Paphia glycerium*.
1705. RILEY, C. V. Fire-flies. <Sci. Amer., 26 July, 1879 [v. 55], n. s., v. 41, p. 49. S.-b. No. 23, p. 104.
Definition of "Fire-flies;" description of larva, pupa, and imago of *Photinus pyralis*; *Photuris pennsylvanicus*, the commonest species in the more northern states; absence or imperfect development of wings in certain female *Lampyridæ*.

1706. RILEY, C. V. Grape-scale insect, new species. <Pacific Rural Press, 16 August, 1879. S.-b. No. 32, p. 66.
Answer to inquiry of editor of Press; a new coccid, allied to *Pulvinaria vitis*.
1707. RILEY, C. V. Dragon-flies. <Sci. Amer., 23 August, 1879 [v. 55], n. s., v. 41, p. 113. S.-b. No. 23, p. 100.
Description and natural history of *Libellulidæ*.
1708. RILEY, C. V. Failure of tea roses. Habits of Fuller's rose beetle, *Aramigus fulleri* Horn. <Sci. Amer., 30 August, 1879 [v. 55], n. s., v. 41, p. 129, fig. S.-b. No. 23, pp. 114-116. Reprint: <Gardener's Mo. and Hortic., October, 1879, v. 21, pp. 310-311, fig. S.-b. No. 23, pp. 126-127. Reprint, with additions: <Ann. Rept. [U. S.] Commissioner Agric. for 1878, 22 November, 1879, pp. 255-257, pl. 17, f. 2.
See No. 1721 for synopsis of contents.
1709. RILEY, C. V. The "Devil's darning needle." <Sci. Amer., 6 September, 1879 [v. 55], n. s., v. 41, p. 148. S.-b. No. 23, p. 104. Review: <Sci. Amer., 27 September, 1879 [v. 55], n. s., v. 41, p. 194. S.-b. No. 23, p. 103½.
Diaperomera femorata winters in the egg-state; W. J. McGee confounds the above with a species of *Ranatra*; the term "Devil's darning needle" mostly associated in the popular mind with the dragon-flies (*Libellulidæ*).
1710. [RILEY, C. V.] The red-spider on roses. <Sci. Amer., 13 September, 1879 [v. 55], n. s., v. 41, p. 161. S.-b. No. 23, pp. 116-117.
Nature, ravages, and means against *Tetranychus telarius*; habits and transformations of *Acarina*.
1711. RILEY, C. V. Philosophy of the pupation of butterflies. <Sci. Amer. Suppl. No. 193, 13 September, 1879, p. 3069, 3 figs. S.-b. No. 23, p. 125. Reprint: <Science News, 15 September, 1879, v. 1, pp. 346-350. Reprint with changes: <Nature, 16 October, 1879, v. 20, pp. 594-595. <Kosmos, January, 1880, bd. 6, pp. 313-318. <Proc. Amer. Assoc. Adv. Sci. for 1879, 1880, v. 28, pp. 455-463, figs. <Separate: Salem, Mass., July, 1880, 9 pp., 6 figs. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, pp. 162-167, figs. 65-70. Abstract: <The Field Nat. and Sci. Student, January, 1883, pp. 179-180. S.-b. No. 42, p. 1. <Bull. Philos. Soc. Wash., 1879, v. 3, pp. 41-43.
Illustrates the prevalent explanation of the manner in which suspended chrysalids become attached to their supports; describes and illustrates the more correct process; structure of the terminal joint of the chrysalis especially in *Vanessa antiopa*, *Terias* sp., *Danaus archippus*, and *Paphia glycerium*.
1712. RILEY, C. V. Parasites of the cotton-worm. <Ca. Ent., September, 1879, v. 11, pp. 161-162.
List of parasites of *Aletia argillacea* [= *xylina*]; descriptions of *Trichogramma pretiosa* n. sp. [p. 161], *Cirrospilus* [= *Tetrastichus*] *esurus* n. sp. [p. 162], and *Tachina aletiae* n. sp. [p. 162].

1713. RILEY, C. V. [Insect injurious to junipers.] <Ca. Ent., September, 1879, v. 11, p. 177.
Junipers on Long Island injured by *Dapsilia rutilana*.
1714. RILEY, C. V. The imported cabbage-worm in the South. <Farmer's Review, September, 1879. S.-b. No. 23, p. 106.
Spread of *Pieris rapæ* westward and southward; its present distribution; southern limit of distribution of *Doryphora 10-lineata*.
1715. RILEY, C. V. The shedding of the tracheæ and double cocoons. <Amer. Nat., October, 1879, v. 13, p. 652.
Review of two notes by E. Potts.
1716. RILEY, C. V. Leaf-galls on the grape-vine. <N. Y. Tribune, 1 October, 1879. S.-b. No. 23, pp. 117; 173. See: <Kansas Farmer, 26 November, 1879. S.-b. No. 26, p. 9. <West. Rural, 10 December, 1879.
Habits, ravages, reproduction, and distribution of *Phylloxera vastatrix*.
1717. RILEY, C. V. The Croton bug as a library pest. <Library Journal, September-October, 1879, v. 4, p. 376.
Letter to Weston Flint; ravages of and means against *Blatta* [= *Ectobia*] *germanica*.
1718. RILEY, C. V. The Ailanthus silk-worm, *Attacus* (*Samia*) *cynthia*. <Science News, 15 October, 1879, v. 1, pp. 377-383. Extract: <Amer. Ent., March, 1880 [v. 3], n. s., v. 1, pp. 56-58, fig. 16. <Farmer's Review, 8 January, 1880, v. 4. S.-b. No. 23, pp. 167-168.
Description of eggs, larvæ, and imago of *Samia* [= *Attacus*] *cynthia*; history, food-plants, acclimation, and artificial rearing of the same, and of *Samia* [= *Attacus*] *ricini*; differences between the eggs, larvæ, and cocoons of the two species; availability of these and other species for silk-culture; superiority of *Sericaria mori* for this purpose; occurrence of parthenogenesis and of retardation of development in *Bombycidae*.
1719. RILEY, C. V. The cotton-worm. Letter from Prof. C. V. Riley on some recent cotton-worm articles in the News. <Galveston [Tex.] Daily News, 24 October, 1879, v. 38, No. 185, p. 2. S.-b. No. 23, pp. 164-165. Reply: <*Ibid.*, 31 October, 1879, No. 191, p. 4.
Critical review of W. J. Jones's "The cotton caterpillar," and of Investigator's "The cotton-worm;" denies that *Aletia argillacea* [= *xylina*] hibernates in the pupa state; author not interested in entomological discoveries for mercenary ends.
1720. RILEY, C. V. [Spread of *Pieris rapæ* into Alabama.] <Ca. Ent., October, 1879, v. 11, p. 196.
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* Translation: <Acker- und Gartenbau-Zeitung, 1 June, 1880, v. 11, p. 87, fig. S.-b. No. 23, p. —.

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Notice of S. A. Forbes' "The food-habits of thrushes;" incompleteness of our knowledge of the food-habits of birds and of *Carabidae*; author's opinion favorable to the birds.

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* Translation: <Acker- und Gartenbau-Zeitung, 1 August, 1880, v. 11, p. 119, 2 figs. S.-b. No. 23, p. —. Extract: <Prairie Farmer, 22 November, 1879, v. 50, p. 370. S.-b. No. 23, pp. 168-169. <Amer. Rural Farmer, 18 December, 1879. S.-b. No. 45, pp. 23-24.

† Translation: <Acker- und Gartenbau-Zeitung, 1 September, 1880, v. 11, p. 135, fig. S.-b. No. 23, p. 182.

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Answer to communication from E. A. Smith; hams injured by larvæ of *Piephila casei*; means against these and other insects injuring hams.
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Figures larva, pupa, and imago of *Anthrenus scrophulariæ*; food-plants and habits of imago and ravages of larva; importation, distribution, vernacular names of and means against the same.
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Occurrence of *Scolytus quadrispinosus* in Washington Territory.
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Circumstances under which queen bees may be sent by mail; exclusion of pinned insects from the same.
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1769. RILEY, C. V.—Continued.

tory and refutation of the annual immigration theory; division of the cotton belt into regions wherein, respectively, *A. argillacea* [= *xyliua*] is permanent and temporary; food-habits and enemies of the same.

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Answer to letters of P. S., T. A. C., and J. W.; seasons, ravages of and means against *Agilus ruficollis*.

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Impracticability of W. J. W.'s suggestion as indicated in title.

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Answer to inquiry of D. B. Woodbury; food-plants of *Tolyte vellela*.

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Mentions several insects received from J. F. Bailey, of Marion, Ala.; larva of *Papilio philenor* feeds on *Aristolochia*; *Bombus virginicus* ♀ robs hives of *Apis mellifica*; *Mytilaspis pomicoortois* [= *pomorum*] not before received from so far south; means against the same.

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Answer to letter of W. J. Jones; pupae of *Agrotis inermis* [= *sauola*] and *Prodenia lineatella* from cotton field.

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Answer to inquiry of W. W. F.; several "weevils" infest clover-seeds; *Hylesinus trifolii* infests the roots and lower part of the stem.

1778. [RILEY, C. V.] Effects of cold applied to the chrysalides of butterflies. <Amer. Ent., May, 1880 [v. 3], n. s., v. 1, pp. 110–111.

Notice of the experiments of W. H. Edwards; effects of hibernation in the chrysalis and imago states.

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Review of paper by G. Macloskie.
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Report of meeting of the Entomological Society of London; length of proboscis of and presence of scent organ in *Sphingidæ*; perception of colors in *Rhopalocera*; secondary sexual character in *Callidryas* and other genera; according to R. Meldola the proboscis of *Macrosila cluentius* is 23.5^{cm} (9½ inches) long.
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Answer to letter of S. A. Conrad; description of all stages of *Aleurodes* sp. from leaves of *Oxalis* sp.
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Answer to inquiry of S. A. Forbes; two coleopterous larvæ from the stomach of *Micropterus salmoides*; one a dytiscid, the other perhaps a dasyllid.
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Answer to letter of D. Th.; ravages of *Ligyrrus rugiceps* upon sugar-cane, maize, and grasses; recommends use of lamp and kerosene pan, and figures one form of such apparatus.
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 Criticism of a discussion before the London Entomological Society; the winged imagos of *Lampyridæ* can intermit their light; the larvæ and wingless imagos can suppress their light.
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Answer to letter of J. A. Warder; figure of gall of *Cynips* (n. sp.?) from twig of *Quercus prinus* var. *acuminata*; comparison of this gall with that of *C.* [= *Andricus*] *q. punctata*; the flies bred from these galls issue in spring and are all females, but probably have a bisexual form producing a different gall.
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Answer to inquiry of H. D. M. Fair; distribution, habitat, transformations, and seasons of *Galerita janus*; figure of larva of *G. lecontei*.
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1831. RILEY, C. V. A parasite on *Prodoxus decipiens*. <Amer. Ent., June, 1880, [v. 3], n. s., v. 1, p. 156.
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 Description of egg, larva, and imago and figures of all stages of *Melasoma* [= *Lina*] *scripta*; description and figures of variations of the imago; habits, ravages, seasons, food-plants, and means against the same; figure of *M.* [= *L.*] *lapponica* and of larva of *M.* [= *L.*] *populi*; description of these larvæ and of that of *M.* [= *L.*] *tremulæ*; food-plants and distribution of these species; acquisition of new habits by insects.
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 Broods of *Cicada* [= *Tibicen*] *septendecim* and *C.* [= *T.*] *tredecim* which appear in 1880.
1837. [RILEY, C. V.] Use of guano for grape Phylloxera. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 173. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 2.
 Application of sulphide of carbon with infusorial earth or guano.
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Answer to letter of J. K. P. Wallace; ravages of an unknown, apparently hymenopterous, larva in wheat stalks; figure of larva and pupa of *Meromyza americana* and of stalks injured by the same.
1849. [RILEY, C. V.] Linden and ash destroyers. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 181. Reprint: <Suppl. to Amer. Ent., July, 1880, p. 4.

1849. RILEY, C. V.—Continued.

Answer to letter of Shelby Reed; season of appearance of *Odontota rubra* on *Tilia*; larvæ of *Hyphantria textor* [= *cunea*] feeding on the same; *Saperda calcarata* boring in poplar, and an unknown larva (*Neoclytus caprea*?) boring in black-ash.

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Answer to letter of T. V. Munson; twigs of apple-trees bored by larvæ of *Oberea* sp.?

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Answer to letter of S. A. Forbes; larvæ of *Anax junius* and *Palingenia* [= *Hexagenia*] *bilineata* named; the latter common in the stomach of fishes.

1852. [RILEY, C. V.] First appearance of cotton-worm in prairie belt. <Amer. Ent., July, 1880 [v. 3], n. s., v. 1, p. 181. Reprint: <Suppl. to Amer. Ent., July, 1880, pp. 3-4.

Answer to letter of J. F. Bailey; larvæ of *Aletia argillacea* [= *zylina*] appear first on lands where the cotton is luxuriant.

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Answer to letter of S. A. Forbes; character of larva of *Gyrinus*; a mass of terrestrial insects including *Typhlocyba vitis*? a muscid, a Eurytomid, *Jassus* sp., *Triphleps insidiosus*, and other species from the stomach of Ohio shad.

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Differences between *Pronuba yuccasella* and *Prodoxus decipiens* in the form, sculpture, and color of the terminal joint, and of the ovipositor.

1855. [RILEY, C. V.] The grape-vine flea-beetle, *Graptodera chalybea* Illig. <Amer. Ent., August, 1880 [v. 3], n. s., v. 1, pp. 183-184, fig. 86.

Habits, seasons, ravages of, and means against *Graptodera* [= *Haltica*] *chalybea*; figures, injured leaf, and larvæ, cocoon, and imago of the same.

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Record of experiments by W. A. Henry upon the effect of Pyrethrum powder on *Halticidæ*, *Meloidæ*, *Pieris rapæ*, *Coreus* [= *Anasa*] *tristis*, and *Blattidæ*; and of the fumes of burning pyrethrum on various insects.
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Final transformations of individuals from a single batch of eggs of *Epicauta vittata* occurring at the first, second, and third year after hatching.
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Experiments by W. S. Barnard upon the effect of alcoholic extracts of the flowers and stems of the ox-eye daisy on insects; "no evidence that they will prove of any practical value."
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Meeting of the U. S. Entomological Commission; plan of work to be done in 1880-1881; partial list of persons engaged in the work.
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Commendation of the above work and of the supplementary list of *Elatridæ* by E. Candèze; need of co-operation for the completion of the whole catalogue.
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Larvæ of *Plusia brassicæ* devour those of *Pieris rapæ* and *Pionea rimosalis* in default of more natural food.
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Answer to letter of G. T.; ravages, distribution, and figures of *Epicærus imbricatus*; description of eggs, ravages, food-plants, and means against *Graptodera* [= *Haltica*] *carinata*.
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Answer to letter of S. A. Forbes; *Lampronota* sp. eaten in quantity by blue-birds.
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 Abstract of paper by Jousset de Bellesme; direction of flight not determined by the motion of the wings, but principally by the displacement of the center of gravity, resulting from the changes of position of other parts of the body.
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 Notice of the continuation of the appropriations by Congress for field-work and experiments in the entomological division of the U. S. Department of Agriculture.
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Notice of a congress to be held in Spain to consider all topics connected with the ravages of *Phylloxera vastatrix*.

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Obituary notice.
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Exposition of J. Lichtenstein's theory that most *Aphididae*, especially gall-making *Pemphigini*, live upon two different plants in passing through their cycle of development; cites instances in which the host-plants are of different families.
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The abundance of *Blissus leucopterus* is connected with the moisture of the season; extraordinary noxiousness of this insect in the dry season of 1881 in various parts of the United States.

2019. [RILEY, C. V.] *Phylloxera* laws. <Amer. Nat., October [23 September], 1881, v. 15, p. 821.
Summary of the existing laws regulating the traffic in plants, with a view of preventing the introduction of *Phylloxera vastatrix* into different countries.
2020. [RILEY, C. V.] One-half the vine area of France affected by *Phylloxera*. <Amer. Nat., October [23 September], 1881, v. 15, p. 821.
Statement that nearly one-fourth of the area of vineyards in France is destroyed by *Phylloxera vastatrix* and as much more attacked; submersion the only sure remedy, and the use of American resisting stocks the only available preventive.
2021. [RILEY, C. V.] London purple and Paris green. <Amer. Nat., October [23 September], 1881, v. 15, p. 821.
London purple more than twice as efficacious and less expensive than Paris green as an insecticide; it needs to be well ground; composition of London purple.
2022. [RILEY, C. V.] Entomologist for the Pacific coast. <Amer. Nat., October [23 September], 1881, v. 15, pp. 821-822.
Notice of attempts made to have a State entomologist appointed in California.
2023. [RILEY, C. V.] *Dilar* in North America. <Amer. Nat., October [23 September], 1881, v. 15, p. 822.
Notice of paper by R. McLachlan.
2024. [RILEY, C. V.] Locusts in Nevada. <Amer. Nat., October [23 September], 1881, v. 15, p. 822.
Statement from Reno [Nev.] Journal that the countless locusts which hatched in western Nevada in the spring of 1881 flew toward the Sierra Nevada without doing any injury.
2025. [RILEY, C. V.] Odor in butterflies. <Amer. Nat., October [23 September], 1881, v. 15, p. 822.
Notice of paper by Miss M. E. Murtfeldt.
2026. RILEY, C. V. General index and supplement to the nine reports on the insects of Missouri. <Bull. No. 6, U. S. Ent. Commission [24 March], 1881, 178 pp.
Order of matter: (1) Introduction. (2) Table of contents. (3) Corrections. (4) Notes and additions. (5) Descriptions of new species and varieties. (6) List of descriptions of adolescent states. (7) List of descriptions, mostly amplified, of species not new. (8) List of illustrations by reports. (9) Classified list of illustrations. (10) General index. (11) Index to food-plants.
2027. [RILEY, C. V.] The permanent subsection of entomology at the recent meeting of the A. A. A. S. <Amer. Nat., 1881, v. 15, November [28 October], pp. 909-912; [3] December, pp. 1008-1011.
Notice of the meeting at Cincinnati, Ohio, August, 1881, with abstracts and notices of papers read.
2028. RILEY, C. V. The new imported clover enemy. <Amer. Nat., November [28 October], 1881, v. 15, pp. 912-914.
Occurrence and habits of *Phytonomus punctatus* in New York; description of the egg and larva of the same; food-plants of the European species of *Phytonomus*.

2029. RILEY, C. V. *Crambus vulgivagellus*. <Amer. Nat., November [28 October], 1881, v. 15, pp. 914-915.
Excessive abundance of this species in the eastern United States in 1881; description of the egg; method of oviposition.
2030. RILEY, C. V. Larval habits of *Sphenophori* that attack corn. <Amer. Nat., November [28 October], 1881, v. 15, pp. 915-916.
Several species of *Sphenophorus* injurious to maize-plants in different parts of the United States; habits and ravages of *S. robustus*.
2031. [RILEY, C. V.] Effect of drought on the Hessian fly. <Amer. Nat., November [28 October], 1881, v. 15, p. 916. See: <N. E. Farmer, 10 December, 1881. S.-b. No. 45, p. 39. <Farmer's Review, 15 December, 1881. S.-b. No. 45, p. 99.
Hot and dry weather dries up and kills *Cecidomyia destructor* and its parasites.
2032. [RILEY, C. V.] *Simulium* from Lake Superior. <Amer. Nat., November [28 October], 1881, v. 15, p. 916.
Notice of paper by H. A. Hagen; larvæ and pupæ from Lake Superior similar to those of *S. pictipes*, but the imagoes from the same locality are different.
2033. [RILEY, C. V.] Coleopterous cave fauna of Kentucky. <Amer. Nat., November [28 October], 1881, v. 15, pp. 916, 917.
Notice of H. G. Hubbard's investigations; *Adelops* contains but one species, which seems to be equally common in all caves in the State; *Ancphthalmus* contains several species, and more may be expected to be found.
2034. [RILEY, C. V.] Hemipterological studies. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.
Notice of paper of V. Signoret.
2035. [RILEY, C. V.] Entomology in Buffalo, N. Y. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.
Notice of Vol. 4, No. 1, of the Bulletin of the Buffalo Society of Natural Science; list of entomological papers therein.
2036. [RILEY, C. V.] *Lampyridæ*. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.
Notice of paper by J. L. Leconte.
2037. [RILEY, C. V.] Severe cold and hibernating apple-worms. <Amer. Nat., November [28 October], 1881, v. 15, p. 917.
According to A. J. Cook larvæ of *Carpocapsa pomonella* were killed in their cocoons where exposed to the severe cold of the winter of 1880-1881.
2038. RILEY, C. V. [Address delivered 4 November, 1881, at the cotton convention held in Atlanta, Ga., 2-4 November, 1881.] <[U. S. Department of Agriculture.] Address of Hon. George B. Loring... and other proceedings of the cotton convention, Washington, 1881, pp. 19-35. Reprint: <Atlanta Constitution, 5 November, 1881. S.-b. No. 24, p. 34.
Beneficial and injurious influence of insects; methods of counteracting the same; ravages and natural history of and search for means against *Aletia argillacea* [= *xylina*]; improved methods and contrivances for the application of poisons to plants.

2039. RILEY, C. V. The chinch bug. <Amer. Agric., November, 1881, v. 40, p. 476, figs. 1-3. S.-b. No. 42, pp. 21-23.
Ravages, food-plants, and natural history of *Blissus leucopterus*; descriptions and figures of its several stages and of dimorphic form of the imago; effect of wet weather upon it.
2040. [RILEY, C. V.] Retarded development in insects. <Amer. Nat., [3] December, 1881, v. 15, pp. 1007-1008. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1881, [13 October], 1882, v. 30, pp. 270, 271. Notice: <Gardener's Chronicle, 27 May, 1882, v. 17, pp. 708-709. S.-b. No. 42, p. 31.
Eggs of *Caloptenus spretus* retained their vitality four and one-half years under abnormal environment and then hatched on exposure to normal conditions; speculations on the cause of the phenomena of retardation of development.
2041. [RILEY, C. V.] Preparation of Diptera. <Amer. Nat., [3] December, 1881, v. 15, p. 1008.
Notice of paper of J. Milk.
2042. [RILEY, C. V.] Another herbivorous ground-beetle. <Amer. Nat., [3] December, 1881, v. 15, p. 1011.
Anisodactylus confusus injuring strawberry-plants in California.
2043. [RILEY, C. V.] A disastrous sheep parasite. <Amer. Nat., [3] December, 1881, v. 15, p. 1011.
A parasite (*Trichodectes ovis*?) doing great injury to sheep in Illinois.
2044. [RILEY, C. V.] Locusts in the West. <Amer. Nat., [3] December, 1881, v. 15, p. 1013.
Caloptenus spretus scarce in Colorado and Kansas; *Camnula pellucida* abundant on the Pacific coast; destructiveness of locusts in many parts of South America and of *Pachytylus migratorius* in Turkey; means adopted against the latter.
2045. [RILEY, C. V.] Structure of the claw in *Psocina*. <Amer. Nat., [3] December, 1881, v. 15, pp. 1013-1014.
Notice of paper of H. A. Hagen.
2046. [RILEY, C. V.] Insect collection for sale. <Amer. Nat., [3] December, 1881, v. 15, p. 1014.
Notice of the collection of Coleoptera left by C. Trabrandt.
2047. RILEY, C. V. Peach-tree bark-borer. Important note from Prof. C. V. Riley. <Rural New Yorker, 24 December, 1881, v. 40, p. 866. S.-b. No. 42, p. 13.
Habits and ravages of *Phænotribus liminaris*; means against bark-borers.
2048. RILEY, C. V. The chinch-bug. <Amer. Agric., December, 1881, v. 40, p. 515, figs. 1-4. S.-b. No. 42, pp. 23-26.
Figures *Anthocoris* [= *Triphleps*] *insidiosus* and *Harpactor* [= *Milyas*] *cinctus* as enemies of *Blissus leucopterus* and *Nysius destructor* [= *angustatus*] and *Piesma cinerea* as likely to be confounded with it; mentions other enemies of the chinch-bug; means against it; importance of irrigation.
2049. RILEY, C. V. On the oviposition of *Prodoxus decipiens*. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, pp. 62-63. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1881 [13 October],

2049. RILEY, C. V.—Continued.
1882, v. 30, p. 272. Separate: <[Salem, Mass., February, 1882], p. 3.
Time and manner of oviposition of *Prodoxus decipiens* in stem of *Yucca filamentosa*.
2050. [RILEY, C. V.] Clover insects. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 63.
Notice of paper of J. A. Lintner.
2051. RILEY, C. V. Horn's classification of the *Carabidæ*. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, pp. 63-64.
Notice of paper of G. H. Horn.
2052. [RILEY, C. V.] The butterfly-trees of Monterey again. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 64.
Swarming and migrating habits of *Danaïis archippus*; hibernation of the same.
2053. [RILEY, C. V.] Interest felt in economic entomology in California. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 65.
Notice of a call issued by the Board of State Horticultural Commissioners of California for a State convention to consider horticultural subjects, including means against insects.
2054. [RILEY, C. V.] Obituary. <Amer. Nat., January, 1882 [30 December, 1881], v. 16, p. 65.
Biographical notice of J. D. Putnam; announcement of the death of G. V. Mniszech.
2055. RILEY, C. V. New insects injurious to agriculture. <Amer. Nat., February [25 January], 1882, v. 16, pp. 151-152. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1881, [13 October], 1882, v. 30, pp. 272-273.
The occurrence of previously unnoticed noxious insects due to, 1, the introduction of species from abroad; 2, previously existing unnoticed species; and 3, the acquisition of new habits by previously known innocuous species; in the last case the acquisition of new habits may be accompanied by the acquisition of new descriptive character, thus constituting a new species; new species thus become developed within brief periods of time.
2056. [RILEY, C. V.] New entomological periodicals. <Amer. Nat., February [25 January], 1882, v. 16, pp. 152-153.
Notice of several prospective periodicals.
2057. [RILEY, C. V.] Locust probabilities for 1882. <Amer. Nat., February [25 January], 1882, v. 16, p. 153.
Favorable prospects of immunity from ravages of *Caloptenus spretus* in 1882.
2058. [RILEY, C. V.] Entomological notes. <Amer. Nat., February [25 January], 1882, v. 16, p. 153.
Notice of J. J. Weir's paper on the "Lepidoptera of the Outer Hebrides," etc.
2059. [RILEY, C. V.] Bibliography of gall literature. <Amer. Nat., March [24 February], 1882, v. 16, pp. 246-247.
Notice of the record of F. Thomas.

2060. RILEY, C. V. A new depredator infesting wheat-stalks. <Amer. Nat., March [24 February], 1882, v. 16, pp. 247-248, fig. 1.

Isosoma allynii French is a species of *Eupelmus* probably parasitic on some of the wheat-stalk feeders and on some species of *Chlorops*; habits and figures of larva and description of female imago of *Isosoma tritici* [p. 247]; comparisons between *I. tritici* and *I. hordeti*; alleged habits of *I. lineare* of Europe; relative conspicuousness of the "humeral spot" in European, American, and Australian species of *Isosoma*. See No. 2063.

2061. RILEY, C. V. Further notes on the imported clover-leaf weevil (*Phytonomus punctatus*). <Amer. Nat., March [24 February], 1882, v. 16, pp. 248, 249.

Identity of *Phytonomus optimus* Lec. with *P. punctatus* Fab.; instances in which injurious insects have been overlooked for a long time; probability that plant-feeding Coleoptera imported from Europe will not spread far from the Atlantic coast; some species, injurious in Europe, are thus far innocuous in America; hibernation of and means against *P. punctatus*.

2062. [RILEY, C. V.] Silk-worm eggs; prices and where obtained. <Amer. Nat., March [24 February], 1882, v. 16, pp. 249-250.

Sources from which eggs of *Serica mori* can be obtained in the United States for purposes of silk-culture; prices at which eggs are sold by Crozier & Co.

2063. RILEY, C. V. The wheat *Isosoma*. A new depredator infesting wheat-stalks. <Rural New Yorker, 4 March, 1882. S.-b. No. 42, pp. 55-56. See: <Sci. Amer. Suppl., 17 June, 1882. S.-b. No. 37, p. 57.

Description of female imago of *Isosoma tritici*; habits, ravages, and distribution of and means against the same; comparison with related species; a probable parasite of it, described as *Isosoma allynii* by G. H. French, belongs to the genus *Eupelmus*. See No. 2060.

2064. RILEY, C. V. Possible food-plants for the cotton-worm. <Amer. Nat., April [22 March, 1882], v. 16, pp. 327-329. Reprint: <Rept. [U. S.] Com. Agric. for 1881 and 1882, 1882 [January, 1883], pp. 164-166. Separate: <pp. 164-166.

Food-plants of *Aletia xyliana*. See No. 2119 for synopsis of contents.

2065. [RILEY, C. V.] Mode of feeding on the larva of *Dytiscus*. <Amer. Nat., April [22 March], 1882, v. 16, p. 330.

Notice of paper of E. Burgess; structure of the mouth of the larva of *Dytiscus*; manner in which this larva feeds.

2066. [RILEY, C. V.] Entomological notes. <Amer. Nat., April [22 March], 1882, v. 16, p. 330.

Brief notices of several articles recently published with items of news.

2067. [RILEY, C. V.] Riley's researches. Orange insects and the cotton-worm; how the orange insect operates and the cure for its ravages; the hibernation of the cotton-worm; settlement of a mooted question. <Florida Daily Times, 29 March, 1882. S.-b. No. 42, pp. 28-29.

Report of interview with C. V. Riley; discovery by W. H. Ashmead that "orange rust" is caused by a mite; habits of and means against the same;

2067. RILEY, C. V.—Continued.

successful application by H. G. Hubbard of an emulsion of kerosene and milk as a means against this mite and against scale-insects; proof of the hibernation of *Aletia argillacea* [= *xylina*] in the extreme south of the United States; means against the *Aletia*.

2068. RILEY, C. V. Prof. C. V. Riley and the Yucca moth. <Gardener's Mo. and Hortie., March, 1882, v. 24, p. 92. S.-b. No. 23, pp. 198-199.

Critical review and reply to editorial of T. Meehap.

2069. RILEY, C. V. The *Noctuidæ* in the Missouri entomological reports. <Papilio, March, 1882, v. 2, pp. 41-44. Separate: <N. Y., 1882, 4 pp.

Critical review of paper of A. R. Grote; discussion of the synonymy of the *Noctuidæ* in the Missouri entomological reports.

2070. RILEY, C. V. Silk-culture in the United States. <Sci. Amer., 1 April, 1882 [v. 60], n. s., v. 46, p. 193. S.-b. No. 42, pp. 93-96.

Statement of the dangers to be avoided and the obstacles to be overcome for the successful establishment of silk-culture in the United States.

2071. RILEY, C. V. Little known facts about well known animals. A lecture delivered in the National Museum, Washington, D. C., April 8, 1882. <Washington, April, 1882, 32 pp., figs. See; <National Farmer, 13 July, 1882. S.-b. No. 42, p. 15. <Prairie Farmer, 22 July, 1882. S.-b. No. 46, p. 99.

The entomological subjects include brief and popular illustrated accounts of the life-histories and transformations of the house-fly (*Musca domestica*) and mosquito (*Culex pipiens*); the development of *Trombidium* from *Astoma*; parasitism; truth of the theory of evolution; reasons for the prevalent ignorance of natural history; interest and value of a knowledge of natural history.

2072. RILEY, C. V. Lichtenstein's theory as to dimorphic asexual females. <Amer. Nat., May [24 April], 1882, v. 16, p. 409.

Criticism of J. Lichtenstein's theory that winged female *Aphididæ* and asexual female *Cynipidæ* are larvæ, and their eggs pupæ; errors in the comparison of these forms with the hypermetamorphic stages of *Meloidæ*.

2073. [RILEY, C. V.] Naphthaline cones for the protection of insect collections. <Amer. Nat., May [24 April], 1882, v. 16, pp. 409-410.

Use of and objections to the use of naphthaline cones; formula of a preferable protective mixture.

2074. [RILEY, C. V.] Injurious insects in California. <Amer. Nat., May [24 April], 1882, v. 16, p. 410.

Notice of treatise of Matthew Cooke.

2075. [RILEY, C. V.] *Sarcophaga lineata* destructive to locusts in the Dardanelles. <Amer. Nat., May [24 April], 1882, v. 16, pp. 410-411.

Notice of communications, by F. Calvert, regarding the parasitic habits of *Sarcophaga lineata*, which preys upon *Ædipoda cruciata*; egg-pods of the same locust destroyed by larvæ of *Callostoma fascipennis*.

2076. [RILEY, C. V.] Parasitic Diptera. <Amer. Nat., May [24 April], 1882, v. 16, p. 411.
Dilophus parasitic in larvæ of *Chætoptria hypericana*; the *Bibionidæ* have hitherto been known only as vegetable feeders in the larval state.
2077. RILEY, C. V. The cotton-worm. <Times-Democrat [New Orleans], 7 May 1882, v. —, p. 4. S.-b. No. 42, pp. 29-31; 112-113; No. 63, pp. 47-48. Reprint: <Rept. [U. S.] Com. Agric. for 1881 and 1882, 1882 [January, 1883], pp. 157-159. Separate: <pp. 97-99.
 See No. 2119 for synopsis of contents.
2078. RILEY, C. V. The house-fly. <Prairie Farmer, 13 May, 1882. S.-b. No. 39, p. 122. See: <Colman's Rural World, 15 June, 1882. S.-b. No. 68, p. 194. <Times-Democrat [New Orleans], 24 June, 1882. S.-b. No. 42, p. 31. <N. E. Farmer, 5 August, 1882.
 Wide distribution of *Musca domestica*; identity of *M. harpyia* with the species; description of eggs; habits, transformations, and hibernation.
2079. RILEY, C. V. Habits of *Cybocephalus*. <Amer. Nat., June [20 May], 1882, v. 16, p. 514.
Cybocephalus nigrifolius feeds on scales of *Chionaspis pinifolii* on *Pinus elliotii* in South Carolina, and *C. californicus* on a scale on apple-trees in California.
2080. [RILEY, C. V.] One effect of the Mississippi floods. <Amer. Nat., June [20 May], 1882, v. 16, pp. 514, 515.
 Probability that *Ligyrrus rugiceps* will have been drowned out of the region submerged for months by the Mississippi River; liability of the importation of new foes with new seed-plants.
2081. [RILEY, C. V.] *Doryphora decemlineata* in England. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.
 A living specimen carried from North America to London, England, in a barrel of potatoes.
2082. [RILEY, C. V.] Dr. Dimmock's inaugural dissertation. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.
 Review of G. Dimmock's paper on "The anatomy of the mouth-parts and of the sucking apparatus of some Diptera."
2083. [RILEY, C. V.] The triungulin of *Meloidæ*. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.
 The triungulin of *Meloe proscarabeus* was described by J. L. Frisch in 1727.
2084. [RILEY, C. V.] Fossil tineids. <Amer. Nat., June [20 May], 1882, v. 16, p. 515.
 Notice of paper of V. T. Chambers; occurrence of the supposed burrow of a tineid larva in a fossil leaf of *Acer* sp.
2085. [RILEY, C. V.] Classification of North American Coleoptera. <Amer. Nat., June [20 May], 1882, v. 16, pp. 515-516.
 Notice of the approaching completion of the classification of the Coleoptera of North America by J. L. Leconte and G. H. Horn.

2086. RILEY, C. V. Hibernation of the army-worm. <Amer. Nat., June [20 May], 1882, v. 16, p. 516.
Confirmation of views in regard to the hibernation of the larvæ of *Leucania unipuncta*; places of oviposition; prospects of extensive injury by these insects in the more northern States in 1882.
2087. RILEY, C. V. Chinch-bug and army-worm prospects. <Rural New Yorker, 27 May, 1882. S.-b. No. 61, p. 27.
Blissus leucopterus abundant in dry weather; *Leucania unipuncta* in wet weather; the latter hibernates principally as a larva; its eggs secreted in old grass and stubble; means against *L. unipuncta*.
2088. RILEY, C. V. Successful management of the insects most destructive to the orange. <Sci. Amer., 27 May, 1882 [v. 60], n. s., v. 46, pp. 335-336, 5 figs.
Treats of *Coccidæ* injurious to the orange; means against the same; use of kerosene emulsion; figures stages of *Mytilaspis pomicorticis* [= *pomorum*], *M. gloveri*, and *M. citricola*.
2089. RILEY, C. V. The utilization of ants in horticulture. <Nature, 8 June, 1882, v. 26, p. 126. Reprint: <Gardener's Chronicle, 17 June, 1882, v. 17, p. 805. S.-b. No. 42, p. 32.
Abstract of paper of C. J. Macgowan; capture and sale of two species of ants which build nests in trees; colonization of these ants in orange orchards to destroy injurious insects.
2090. RILEY, C. V. The army-worm *vs.* the clover hay-worm. Remedies for the army-worm. <Rural New Yorker, 10 June, 1882. S.-b. No. 47, pp. 158-159; No. 61, pp. 32-33. Reprint: <Nat. Farmer, 22 June, 1882. S.-b. No. 37, p. 123. <Lancaster Farmer, July, 1882. S.-b. No. 46, p. 104. <Home and Farm, 1 July, 1882. S.-b. No. 37, p. 122.
Abundance of *Leucania unipuncta* and *Asopia costalis* in Alabama and Tennessee; confusion of the army-worm with the clover hay-worm; prevalence of enemies of and means against the former.
2091. RILEY, C. V. Repelling insects by malodorants. <Amer. Nat., July [22 June], 1882, v. 16, p. 596.
Critical review of paper of J. A. Lintner; odorous substances repel insects more by their toxic properties than by their odor; failure of attempts by the use of strongly smelling substances to prevent oviposition; sight, touch, and taste generally more important in insect economy than smell.
2092. [RILEY, C. V.] Habits of *Bittacus apterus*. <Amer. Nat., July [22 June], 1882, v. 16, pp. 596-597.
Notice of paper of C. R. Osten Sacken; locomotion and food-habits of *Bittacus apterus* in California.
2093. RILEY, C. V. Habits of *Coscinoptera dominicana*. <Amer. Nat. July [22 June], 1882, v. 16, p. 598.
Discovery by F. H. King that *Coscinoptera dominicana* is inquillinous in ants' nests in its earlier stages; similar habits of related species.
2094. [RILEY, C. V.] Sun-spots and insect life. <Amer. Nat., July [22 June], 1882, v. 16, pp. 598-599.
Review of paper of A. H. Swinton; dependence of certain insect phenomena on the periods of sun-spots, through the determination by the latter of meteorological conditions.

2095. RILEY, C. V. The silk-worm. No. 1-3. <National Farmer, 13, 20, 27 July, 1882. S.-b. No. 35, p. 15; No. 48, pp. 32, 49.
Nature of the silk-worm; stages, enemies, diseases, races; wintering and hatching of eggs; feeding and rearing of larvæ; the cocoons; spinning and gathering, choking chrysalids; egg-laying, reproduction, reeling, food-plants.
2096. RILEY, C. V. Change of habit; two new enemies of the egg-plant. <Amer. Nat., August [28 July], 1882, v. 16, pp. 678-679.
Sudden acquisition by *Doryphora juncea* and by *Cassida texana* of the habits of feeding on *Solanum melongena*, these species having been found previously on *S. carolinense* and *S. elæagnifolium* respectively; occurrence of *C. texana* on *S. carolinense*; distribution of the two insects.
2097. RILEY, C. V. Notes on *Microgasters*. <Amer. Nat., August [28 July], 1882, v. 16, pp. 679-680.
Critical review of paper of A. S. Packard; synonymical notes on Packard's species.
2098. [RILEY, C. V.] Are honey-bees carnivorous? <Amer. Nat., August [28 July], 1882, v. 16, p. 681.
Observations of Fritz Müller on the carnivorous habits of Brazilian *Apis*.
2099. [RILEY, C. V.] The "overflow bugs" in California. <Amer. Nat., August [28 July], 1882, v. 16, pp. 681-682.
Extract from letter of Mrs. A. E. Bush, with introductory remarks; occurrence of *Platynus maculicollis* in such abundance as to become a nuisance.
2100. [RILEY, C. V.] Insects and drouth. <Amer. Nat., September [24 August], 1882, v. 16, p. 745.
Occurrence of excessive drouth in the spring and early summer of 1880 in New England; statement by S. Lockwood of the exceptional abundance of several insects in New Jersey in that year.
2101. RILEY, C. V. Probable sound organs in sphingid pupæ. <Amer. Nat., September [24 August], 1882, v. 16, pp. 745-746.
Occurrence of a peculiar structure on the abdominal joints of the pupæ of certain *Sphingidæ*; genera in which this structure is observed; probable connection of this structure with the function of producing sound as observed in *Sphinx atropos*.
2102. RILEY, C. V. Is *Cyrtoneura* a parasite or a scavenger? <Amer. Nat., September [24 August], 1882, v. 16, pp. 746-747.
Cyrtoneura stabulans bred from pupæ of *Aletia argillacea* [= *xylina*] usual food of this species; doubt whether the species is a parasite or is only a scavenger in decayed pupæ; *Phora aletia* merely a scavenger; great liability of pupæ of *Aletia* to decay.
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1. A new enemy to wax-beans; extract from letter of G. H. Stone, on the food-plants, habits, and ravages of *Epilachna corrupta*; distribution of the same. 2. Spread of the 12-punctured asparagus beetle; increasing noxiousness of *Crioceris 12-punctata* recorded from near Baltimore, Md., by O. Luger; comparative description of this species with *C. asparagi*. 3. An internal mite in fowls; presence of *Cytolichus sarcoptoides* in lungs and other parts of diseased chickens.
2136. [RILEY, C. V.] The "lignified snake of Brazil." <Evening Star [Washington, D. C.], 20 January, 1883, v. 61, p. 2. S.-b. No. 42, pp. 59-60. Reprint: <Sci. Amer. Suppl., 17 February, 1883. See: <Science, 23 February, 1883, v. 1, p. 84.
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2137. RILEY, C. V. Utilization of ants in horticulture. <Sci. Amer., 27 January, 1883 [v. 62], n. s., v. 48, p. 49. S.-b., No. 42, pp. 65-66.
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2139. [RILEY, C. V.] *Trogoderma tarsale* as a museum pest. <Amer. Nat., February [31 January], 1883, v. 17, p. 199.
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2150. RILEY, C. V. Dipterous enemies of the *Phylloxera vastatrix*. <Ca. Ent., February [9 March], 1883, v. 15, p. 39.
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2151. [RILEY, C. V.] The food relations of the *Carabidæ* and *Coccinellidæ*. <Amer. Nat., April [15 March], 1883, v. 17, pp. 417-419.
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2152. [RILEY, C. V.] Relations of the *Carabidæ* and *Coccinellidæ* to birds. <Amer. Nat., April [15 March], 1883, v. 17, p. 419.
Reprint of S. A. Forbes's summary, with note; *Coccinellidæ* not eaten by birds; *Carabidæ* eaten in proportion as they have phytophagous habits.
2153. [RILEY, C. V.] Viviparity in a moth. <Amer. Nat., April [15 March], 1883, v. 17, p. 420.
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2154. [RILEY, C. V.] Damage to silver-plate by insects. <Amer. Nat., April [15 March], 1883, v. 17, p. 420.
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2155. RILEY, C. V. Possible food-plants of the cotton-worm. <Amer. Nat., April [15 March], 1883, v. 17, pp. 421-422.
Notice of paper of J. S. Bailey; occurrence of newly issued imagos of *Aletia xyliæ* at Karner, N. Y., 7 and 8 October, 1882, proving that the larva of this insect feeds upon some genus of plants other than *Gossypium*.
2156. [RILEY, C. V.] *Agrotis messoria* Harr. vs. *Agrotis scandens* Riley. <Amer. Nat., April [15 March], 1883, v. 17, p. 422, 2 figs.
Critical review of views of A. R. Grote; *Agrotis lycarum*, *A. repens*, and *A. cochrani* = *A. messoria*; *A. scandens* is a distinct species; comparison of the imagos; figures larvæ and imagos of the two species.
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2158. [RILEY, C. V.] Prevalence of the screw-worm in Central America. <Amer. Nat., April [15 March], 1883, v. 17, p. 423.
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2159. [RILEY, C. V.] Dried leaves as food for lepidopterous larvæ. <Amer. Nat., April [15 March], 1883, v. 17, pp. 423-424.
Review of paper of A. H. Mundt; larvæ successfully fed upon fresh leaves transported from a distance under pressure; chopping the leaves would possibly permit of more rapid curing and more convenient packing.
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Duplication of descriptions of the early stages of Lepidoptera to be avoided; notice of Mrs. C. H. Fernald's list of *Noctuidæ* taken in Orono, Me.

2161. [RILEY, C. V.] Obituary. <Amer. Nat., April [15 March], 1883, v. 17, p. 424.
Obituary notices of G. W. Belfrage and F. W. Mæklin.
2162. R[ILEY], C. V. Mosquitoes *vs.* malaria. <Sci. Amer., 14 April, 1883, v. 48, pp. 224-225. S.-b. No. 42, pp. 63-64; No. 67, p. 8.
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Criticism of the views of Dr. A. F. A. King in support of the thesis that malarial disease is the result of inoculation of the body with malarial poison by the bites of insects; citation of twenty correspondencies in the conditions affecting the prevalence of mosquitoes [*Culicidæ*] and malarial disease.
2163. RILEY, C. V. Jumping seeds and galls. <Sci. Amer., 14 April, 1883, v. 48, p. 228, fig. S.-b. No. 42, pp. 61-63; No. 67, p. 2.
Figures of larva, pupa, and imago of *Carpocapsa saltitans*, with figures and description of seeds inhabited by the larva of this moth, and description of the plant bearing these seeds; vernacular names of plant and insect; movements imparted to the seeds by the insects and by *Cynips q.-saltatorius* to the galls of the same.
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2166. [RILEY, C. V.] Insects as food for man. <Amer. Nat., May [18 April], 1883, v. 17, pp. 546-547.
Summary of Max Buchner's observations on the insects used as food by the Bantus tribe of negroes.

2167. RILEY, C. V. Number of molts and length of larval life as influenced by food. <Amer. Nat., May [18 April], 1883, v. 17, pp. 547-548.

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2168. [RILEY, C. V.] Entomological notes. <Amer. Nat., May [18 April], 1883, v. 17, pp. 549-550.

Brief notes on recent publications.

2169. RILEY, C. V. Larval stages and habits of the bee-fly *Hirmonceura*. <Science, 27 April, 1883, v. 1, pp. 332-334, figs. 1-3. S.-b. No. 42, p. 52.

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2170. RILEY, C. V. The capitalizing of specific names. <Papilio, March [April], 1883, v. 3, p. 62.

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2171. RILEY, C. V. Observations on the fertilization of *Yucca* and on structural and anatomical peculiarities in *Pronuba* and *Prodoxus*. <Gardener's Mo. and Hortie. April, 1883, v. 25, pp. 118-119. S.-b. No. 51, p. 122½. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1882, 1883, v. 31, pp. 467-468. Separate: <Salem. Mass., July, 1883, pp. 467-468. Abstract: <Amer. Nat., February [31 January], 1883, v. 17, p. 197.

Description of the manner in which *Pronuba yuccasella* gathers the pollen in flowers of *Yucca*; the work of this species necessary for the fertilization of the capsular species of *Yucca*, the irregularity of whose fruit is due to its punctures; description of the egg and of the manner of oviposition of this species.

2172. RILEY, C. V. The potato-stalk borer. <Rural New Yorker, 12 May 1883. S.-b. No. 42a, p. 213.

Answer to inquiry; life-history and means against *Baridius* [= *Trichobaris*] *trinotata*.

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Description of seeds of "arrow-weed"; their motions caused by larvæ of *Carpocapsa saltitans*; figures of the seeds and of the larva, pupa, and imago of the *Carpocapsa*; habits and seasons of the same; description of the plant bearing these seeds; character and motions of the gall of *Cynips q.-saltatorius*.

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2178. [RILEY, C. V.] Synopsis of the N. A. *Heliothinae*. <Amer. Nat., June [17 May], 1883, v. 17, pp. 662-663.
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2179. [RILEY, C. V.] Death of Professor Zeller. <Amer. Nat., June [17 May], 1883, v. 17, p. 663.
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2180. [RILEY, C. V.] Protection of insect collections. <Amer. Nat., June [17 May], 1883, v. 17, pp. 663-664.
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2182. [RILEY, C. V.] The sucking organs of bees, wasps, and flies. <Amer. Nat., June [17 May], 1883, v. 17, pp. 664-665.
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2186. RILEY, C. V. *Nemestrinidae*. <Science, 8 June, 1883, v. 1, p. 513.
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2188. RILEY, C. V. Elm-leaf beetle. <Sci. Amer., 16 June, 1883, v. 48. S.-b. No. 42a, p. 265.
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2189. RILEY, C. V. A unique and beautiful noctuid. <Amer. Nat., July [20 June], 1883, v. 17, pp. 788-790, fig.
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2193. RILEY, C. V. The grape Phylloxera in France. <Science, 22 June, 1883, v. 1, pp. 576-578.
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2196. RILEY, C. V. Silk culture in the United States. <Rural New-Yorker, 14 July, 1883, v. 42, p. —. S.-b. No. 42a, p. 531.
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2199. RILEY, C. V. Report by C. V. Riley. <Proc. U. S. Nat. Mus., 27 July, 1883, v. 6, pp. 104-105. Reprint: <Sci. Amer. Suppl., 13 October, 1883, v. 16, p. 6486.
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2200. RILEY, C. V. Emulsions of petroleum and their value as insecticides. <Proc. Amer. Assoc. Adv. Sci. for 1882, 1883, v. 31, pp. 469-470. Separate: <Salem, Mass., July, 1883, pp. 469-470. Reprint: <Kansas City Rev. of Science and Industry, November, 1883, v. 7, pp. 447-448. S.-b. No. 42, p. 124. Extract: <Sci. Amer., 19 November, 1883, v. 49, p. 294. S.-b. No. 51, p. 153.
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2201. [RILEY, C. V.] The old, old question of species. <Amer. Nat., September [15 August], 1883, v. 17, p. 975.
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2202. [RILEY, C. V.] *Myrmecophila*. <Amer. Nat., September [15 August], 1883, v. 17, pp. 975-976.
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2203. [RILEY, C. V.] Salt-water insects used as food. <Amer. Nat., September [15 August], 1883, v. 17, pp. 976-977.
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2204. [RILEY, C. V.] Food-plants of *Samia cynthia*. <Amer. Nat., September [15 August], 1883, v. 17, p. 977.
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2205. [RILEY, C. V.] Bitten by an aphid? <Amer. Nat., September [15 August], 1883, v. 17, p. 977.
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2206. RILEY, C. V. *Steganoptycha claypoleana*. <Amer. Nat., September [15 August], 1883, v. 17, p. 978. Reprint: <Papilio, September-December, 1883, v. 3, p. 191.
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2207. RILEY, C. V. Extermination and restriction of Phylloxera in Switzerland. <Rural New-Yorker, 25 August, 1883, v. 42. S.-b. No. 49, p. 74.
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2208. RILEY, C. V. Hackberry psyllid galls. <Ca. Ent., August [5 September], 1883, v. 15, pp. 157-159, figs. 6, 7.
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2209. RILEY, C.V. Some recent discoveries in reference to *Phylloxera*. <Science, 7 September, 1883, v. 2, p. 336. S.-b. No. 42, pp. 68, 69. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1883, 1884, v. 32, p. 320. Separate: <Salem, Mass., July, 1884, p. 320. <Amer. Nat., December [28 November], 1883, v. 17, p. 1288.
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2210. RILEY, C. V. The *Psyllidæ* of the United States. <Science, 7 September, 1883, v. 2, p. 337. S.-b. No. 42, pp. 67-68. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1883, 1884, v. 32, p. 319. Separate: <Salem, Mass., July, 1884, p. 319.
Characteristics and economic importance of *Psyllidæ*; status of the present knowledge of this family in the United States; list of new genera and species; food-plants of the same; characteristics of the eggs and young of *Psyllidæ*.
2211. RILEY, C. V. Improved method of spraying trees for protection against insects. <Science, 14 September, 1883, v. 2, p. 378. S.-b. No. 42, p. 68. Reprint: <Proc. Amer. Assoc. Adv. Sci. for 1883, 1884, v. 32, pp. 466-467. Separate: <Salem, Mass., July, 1884, pp. 466, 467.
Description of apparatus, especially of "cyclone nozzle" and adjustable hose; mention of insecticide substances.
NOTE.—Nos. 2209-2211 were issued as a separate, Salem, 1884.
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Minutes of the meetings of the entomologists at the session of the American Association for the Advancement of Science; reorganization of the entomological club; election of officers and change in the constitution; abstracts of papers read.
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Habits and variation of *Pædisca scudderiana*; difference between the gall of this insect and that of *Gelsechia gallasolidaginis*.
2214. RILEY, C. V. A myrmecophilous lepidopteron. <Amer. Nat., October [17 September], 1883, v. 17, p. 1070.
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2215. [RILEY, C. V.] Enemies of the egg-plant. <Amer. Nat., October [17 September], 1883, v. 17, p. 1070.
Extract from a letter of A. Cömler, proving that the occurrence of *Cassida tezana* and *Doryphora juncta* on *Solanum melongena* is not accidental or temporary.
2216. [RILEY, C. V.] The periodical Cicada in southeastern Massachusetts. <Amer. Nat., October [17 September], 1883, v. 17, p. 1071.
Note to paper of C. E. Bessey; *Cicada* [= *Tibicen*] *septendecim* at Martha's Vineyard, Mass., in June, 1883, the precursor to *septendecim* Brood XXI which will appear in North Carolina and Virginia as well as Martha's Vineyard in 1884; accelerated specimens of the same brood received from Loudoun County, Va., recently.

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List of insects found in a lot of damaged rice from South America; occurrence of *Murmidius ovalis* in vast numbers in this rice; its probable food-habits; description of its cocoon; list of families of beetles some of whose larvæ spin cocoons; habitat of *Myhocerus*.
2218. [RILEY, C. V.] Obituary. <Amer. Nat., October [17 September], 1883, v. 17, p. 1072.
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2219. [RILEY, C. V.] Entomological notes. <Amer. Nat., October [17 September], 1883, v. 17, pp. 1072-1073.
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2220. [RILEY, C. V.] Economic notes. <Amer. Nat., October [17 September], 1883, v. 17, pp. 1073-1074.
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2221. RILEY, C. V. A parasite of the cabbage-worm. <Rural New Yorker, 6 October, 1883, v. 42. S.-b. No. 42, p. 58.
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2222. RILEY, C. V. The handmaid moth. <Rural New Yorker, 13 October, 1883, v. 42. S.-b. No. 42, p. 77.
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2223. RILEY, C. V. Remarks on *Arzama obliquata*. <Amer. Nat., November [19 October], 1883, v. 17, p. 1169.
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2224. [RILEY, C. V.] Rare monstrosities. <Amer. Nat., November [19 October], 1883, v. 17, p. 1175.
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2225. [RILEY, C. V.] The nervous system of insects. <Amer. Nat., November [19 October], 1883, v. 17, pp. 1175-1176.
Summary of the observations of Ed. Brandt.
2226. [RILEY, C. V.] *Hymenorus rufipes* as a myrmecophilous species. <Amer. Nat., November [19 October], 1883, v. 17, p. 1176.
Imagos of *Hymenorus rufipes* raised from larvæ found in nests of *Formica fusca*; character of the nests of the *Formica*; food-habits of the *Hymenorus* unknown.
2227. [RILEY, C. V.] Recent publications. <Amer. Nat., November [19 October], 1883, v. 17, p. 1177.
Notice of J. H. Comstock's work on *Diaspinæ* and of other recent publications.
2228. [RILEY, C. V.] Entomological notes. <Amer. Nat., November [19 October], 1883, v. 17, pp. 1177-1179.
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2229. RILEY, C. V. The potato-stalk borer. <Rural New-Yorker, 20 October, 1883. S.-b. No. 42, pp. 78-79.
 Answer to letter of S. C. R.; description, habits of, and means against *Gortyna nitela*; means against *Paria aterrima*, *Graphops pubescens*, and other larvæ of *Chrysomelidæ* injurious to the roots of strawberry-plants.
2230. [RILEY, C. V.] Recent advances in horticultural entomology. <Rural New-Yorker, 20 October, 1883, v. 42. S.-b. No. 42, pp. 79-81. Reprint: <Proc. 19th Sess. Amer. Pomol. Soc., 1884, p. 45. <Trans. Wisc. State Hortic. Soc., 1886, v. 17, p. —.
 Report of address delivered; discussion of measures recommended for adoption to prevent the ravages of insects injurious to horticulture, especially of *Carpocapsa pomonella* and *Conotrachelus nenuphar*; correction of statements in regard to the oviposition of *Saperda bivitata* [= *candida*] and ? *Bembex marginata*; advance in knowledge of the life-history of *Aphididæ* and in the development of machinery for the application of poison sprays to plants; relative value of the principal insecticides.
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 List of North American gall-making Coleoptera; description of *Podapion* n. g. [p. 62] and of the gall and imago of *P. gallicola* n. sp., found on twigs of *Pinus inops*; probable life-habits, inquilines, and parasite of this species.
2232. RILEY, C. V. Report of the Entomologist. <Ann. Rept. [U.S.] Commissioner Agric. for 1883, pp. 99-180, 13 pl. Separate: <Washington, 31 October, 1883, pp. 5+ pp. 99-180+ pp. 7, 13 pl.

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2233. RILEY, C. V. The imported orchard *Scolytus* (*Scolytus rugulosus* Ratz.). <Thomasville [Ga.] Times, 10 November, 1883. S.-b. No. 56, p. 182.

Answer to inquiry; *S. rugulosus* bores in twigs of pear; means against it.

2234. RILEY, C. V. Osage orange *vs.* mulberry for the silk-worm. <Sci. Amer., 17 November, 1883, v. 49, p. 305. S.-b. No. 42, p. 91. Reprint: <Amer. Nat., 5 January, 1884, v. 18, pp. 78-79. <Prairie Farmer, 22 March, 1884, v. 56, p. 187. S.-b. No. 42, p. 118.

Comparative value of leaves of *Maclura aurantiaca* and of *Morus* as food for *Sericoaria mori*; critical review of V. des Lauriers's conclusions.

2235. RILEY, C. V. Entomological notes of the year. <Prairie Farmer, 24 November, 1883, v. 55. S.-b. No. 42, pp. 86-87.

Progress of experiments for the destruction of scale insects, *Coccidae*; introduction of *Aspidiotus rapax* into California on apples from New Zealand; strawberries injured by *Capsus oblineatus* [= *Lygus pratensis*] and a myriapod in Illinois; occurrence of *Leucania unipuncta* in several places, and of *Cecidomyia destructor* in Illinois; extension of culture of *Pyrethrum cinerariaefolium* in California; occurrence of *Anarsia lineatella* on strawberry-plants in Illinois; of *Doryphora juncta* and *Cassida texana* on *Solanum melongena* in Georgia; of *Cereza bubalus* on potato-plants in Pennsylvania; of *Epilachna corrupta* on wax-beans, etc.

2236. RILEY, C. V. A satisfactory remedy for melon bugs, flea-beetles, etc. <Rural New-Yorker, 3 November, 1883, v. 42. S.-b. No. 42, pp. 77-78.

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2237. RILEY, C. V. The chinch-bug in New York. <Science, 9 November, 1883, v. 2, p. 621. Extract: <Sci. Amer., 22 December, 1883, v. 49, p. 384. S.-b. No. 42, pp. 122-123.

Present outbreak of *Blissus leucopterus* in New York the result of an increase due to favorable conditions rather than an invasion.

2238. RILEY, C. V. Insects in relation to agriculture. <Stoddard's Encyclopædia Americana, 1883, v. 1, pp. 135-142, figs. 1-29.

Chapter 9 of article "Agriculture." Brief accounts with numerous illustrations of the insects named below, and of means against them, with cross-references to accounts of other insects in other portions of the work. The headings and subjects of the sub-chapters are as follows:

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Distribution, seasons, habits, and food-plants, of and means against *Leucania unipuncta*; references to the more important articles on this insect; figures of larva and imago.

2240. RILEY, C. V. An epidemic disease of *Caloptenus differentialis*. <Amer. Nat., December [28 November], 1883, v. 17, p. 1287.

Note to communication of H. Osborn; the *Entomophthora calopteni* a result rather than the cause of disease.

2241. RILEY, C. V. The growth of insect eggs. <Amer. Nat., December [28 November], 1883, v. 17, p. 1289.

Notice of paper of J. A. Osborne; swelling of the eggs of *Phaneroptera* [= *Scudderia*] *curvicauda* probably connected with embryological development.

2242. [RILEY, C. V.] Protective device employed by a glaucopid caterpillar. <Amer. Nat., December [28 November], 1883, v. 17, p. 1289.

Notice of paper of F. Müller; general use of shed hairs by larvæ of *Arctiida* in the construction of their cocoons; description of method in which the larva of *Eunomia eagrus* arranges its shed hairs to form a protection for the pupa.

2243. [RILEY, C. V.] Saw-fly larvæ on the quince. <Amer. Nat., December [28 November], 1883, v. 17, p. 1289.

Notice of paper of J. A. Lintner; food-plants of *Selandria* [= *Eriocampa*] *cerasi*.

2244. [RILEY, C. V.] Entomology in New York. <Amer. Nat., December [28 November], 1883, v. 17, pp. 1289-1291.
Review of J. A. Lintner's first annual report as State entomologist; list of subjects treated in the report.
2245. [RILEY, C. V.] Fruit insects in California. <Amer. Nat., December [28 November], 1883, v. 17, p. 1291.
Review of M. Cooke's "Injurious Insects of the Orchard."
2246. [RILEY, C. V.] Death of Dr. J. L. Leconte. <Amer. Nat., December [28 November], 1883, v. 17, p. 1291.
Notes the loss to entomologists occasioned by the death of J. L. Leconte.
2247. [RILEY, C. V.] Entomological notes. <Amer. Nat., December [28 November], 1883, v. 17, pp. 1291-1292.
Brief notices of published articles with items of news.
2248. [RILEY, C. V.] Economic notes. <Amer. Nat., December [28 November], 1883, v. 17, p. 1292.
Effect of Phylloxera laws in Europe; use of lime as a means against *Macrodactylus*; award of the Le Brun prize for the most valuable improvement relating to the silk industry.
2249. RILEY, C. V. [Raspberry canes punctured by *Orchelimus glaberrimus*.] <Fruit Recorder, Purdy, 1 December, 1883, v. 15. S.-b. No. 42, p. 92.
Description of and means against *Orchelimus glaberrimus*.
2250. [RILEY, C. V.] The Phylloxera in sandy soil. <Rural New-Yorker, 1 December, 1883, v. 42. S.-b. No. 42, p. 97. Reprint: <Amer. Nat., January, 1884 [29 December, 1883], v. 18, p. 78.
Condition of the grape crop in France; favorable account of the use of American grape-stocks; *Phylloxera vastatrix* harmless in sandy soils.
2251. RILEY, C. V. Bacterial disease of the imported cabbage-worm. <Sci. Amer., 1 December, 1883, v. 49, p. 337. S.-b. No. 42, pp. 91-92. Reprint: <Amer. Nat., January, 1884 [29 December, 1883], v. 18, p. 80.
Notice of observations of S. A. Forbes on the death of larvæ of *Pteris rapa* from infection by *Bacterium*; previous mention of this disease.
2252. RILEY, C. V. The chinch-bug in New York State. <Sci. Amer., 8 December, 1883, v. 49, p. 359. Reprint: <Amer. Nat., 5 January, 1884, v. 18, pp. 79-80.
Critical review of papers of J. A. Lintner; the occurrence of *Blissus leucop-terus* in New York in unusual abundance in 1882 and 1883 is not warrant for great alarm. See No. 2271.
2253. RILEY, C. V. Reports of observations and experiments in the practical work of the division, made under the direction of the entomologist. <Bull. No. 3, Div. Ent. U. S. Dept. Agric., [8 December], 1883, 75 pp., 3 pl.

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2254. RILEY, C. V. Entomology in New York. <Rural New-Yorker, 15 December, 1883. S.-b. No. 42, pp. 85-86.

Review of J. A. Lintner's first report (for the year 1881) as State entomologist of New York.

2255. RILEY, C. V. *Lucilia macellaria*. <Sci. Amer., 15 December, 1883, v. 49, p. 373. S.-b. No. 42, p. 93.

Critical review of paper of F. Humbert.

2256. RILEY, C. V. Dipterous larvæ in the human body. <Sci. Amer., 22 December, 1883, v. 49, p. 385. S.-b. No. 42, p. 90.

References to and notices of several articles on the occurrence of larvæ of Diptera in the human body; synonymy and distribution of *Comptosia* [= *Lucilia*] *macellaria*; myiasis caused solely by larvæ of *Sarcophagidæ* and *Muscidæ*; *Cestridæ* occur rarely and exceptionally in the human body.

2257. RILEY, C. V. Capitalizing specific names. <Papilio, September-December, 1883, v. 3, pp. 164-166. Separate: <[N. Y.], 3 pp.

Comments on reasons given by W. H. Edwards and others for the uniform capitalizing of specific names. See No. 2172.

2258. RILEY, C. V. Townsend Glover. <Papilio, September-December, 1883, v. 3, pp. 167-168.

Obituary notice.

2259. [RILEY, C. V.] The genus *Colias*. <Amer. Nat., [5] January, 1884, v. 18, pp. 74-76.

Review of paper of H. A. Hagen; discussion of the species of *Colias* in North America; plastic nature and classificatory characters of the genus.

2260. [RILEY, C. V.] Larval habits of the dipterous family *Dexiæ*. <Amer. Nat., [5] January, 1884, v. 18, pp. 76-77.

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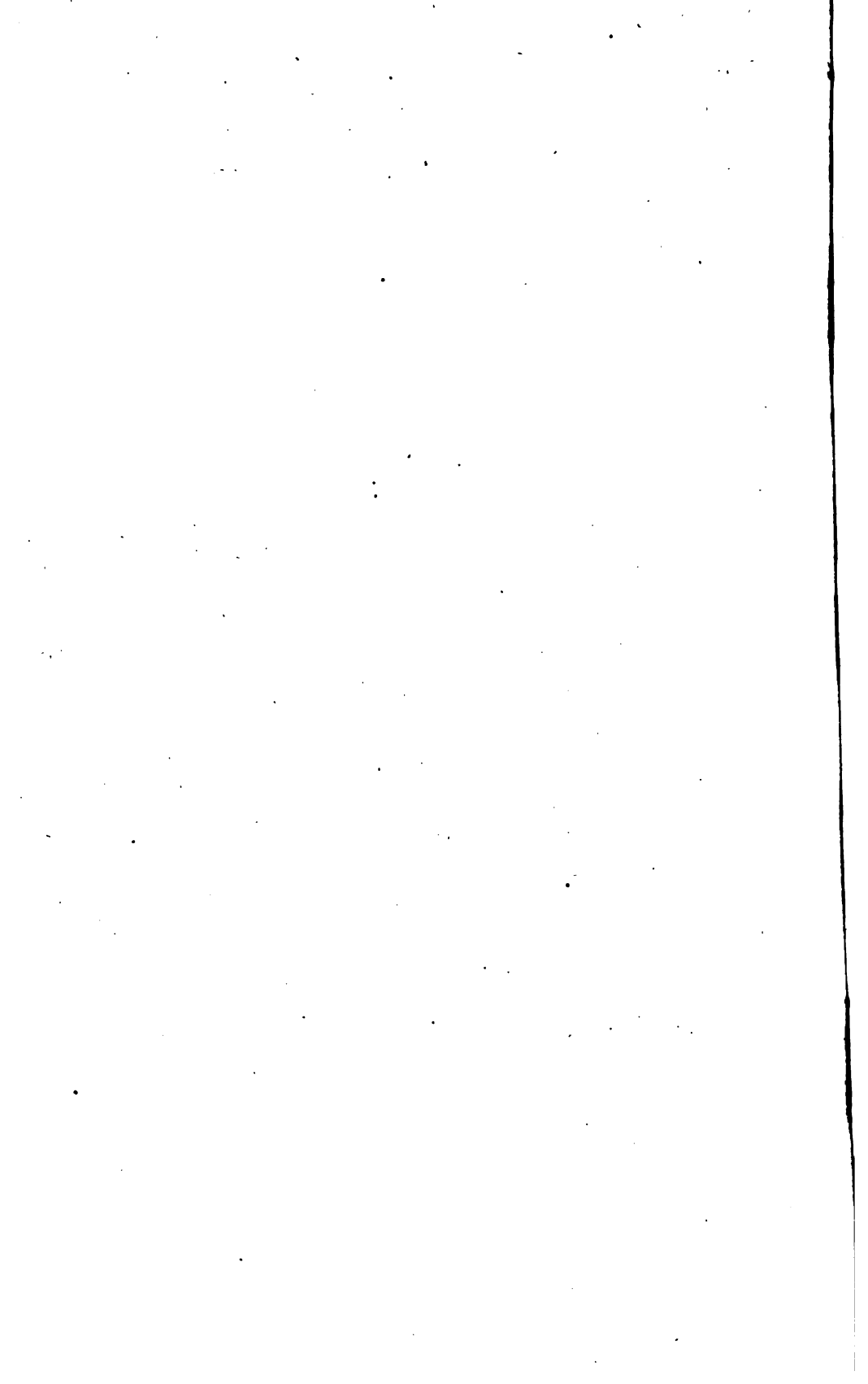
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TO

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INDICES TO PARTS I, II, AND III.

SYSTEMATIC INDEX OF THE NEW NAMES PROPOSED BY B. D. WALSH AND BY WALSH AND RILEY.

[The Walsh and Riley names are followed by W. & R. The first number following the name refers to the number of the paper in the list, the second to the page where the species is first described. As is well known, the Walsh collection was destroyed in the Chicago fire in October, 1871. A few of the types sent to Drs. Hagen and Riley are in the collections of the Museum of Comparative Zoology at Cambridge and the National Museum at Washington. Those at Cambridge are indicated by a *, those at Washington by **.]

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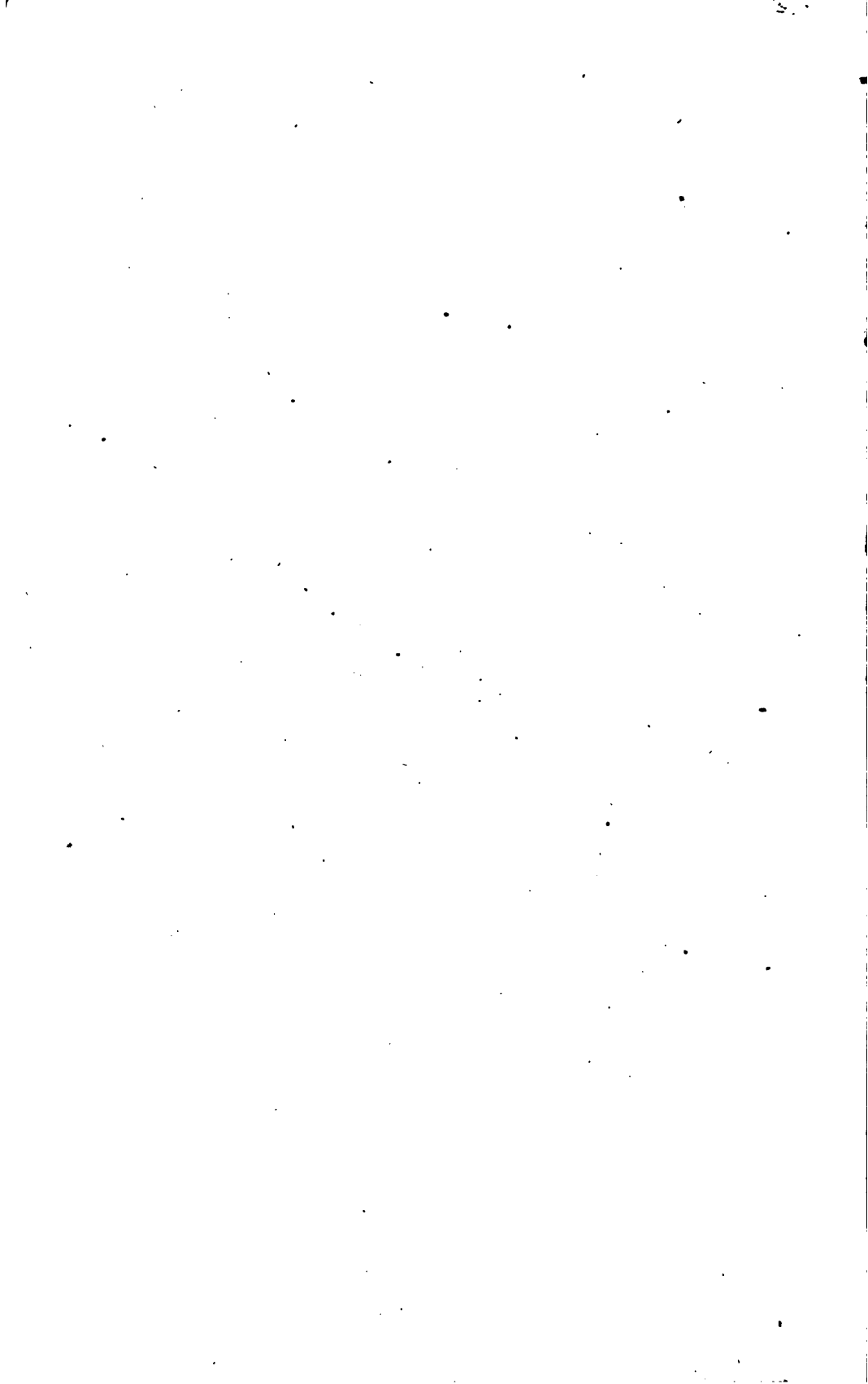
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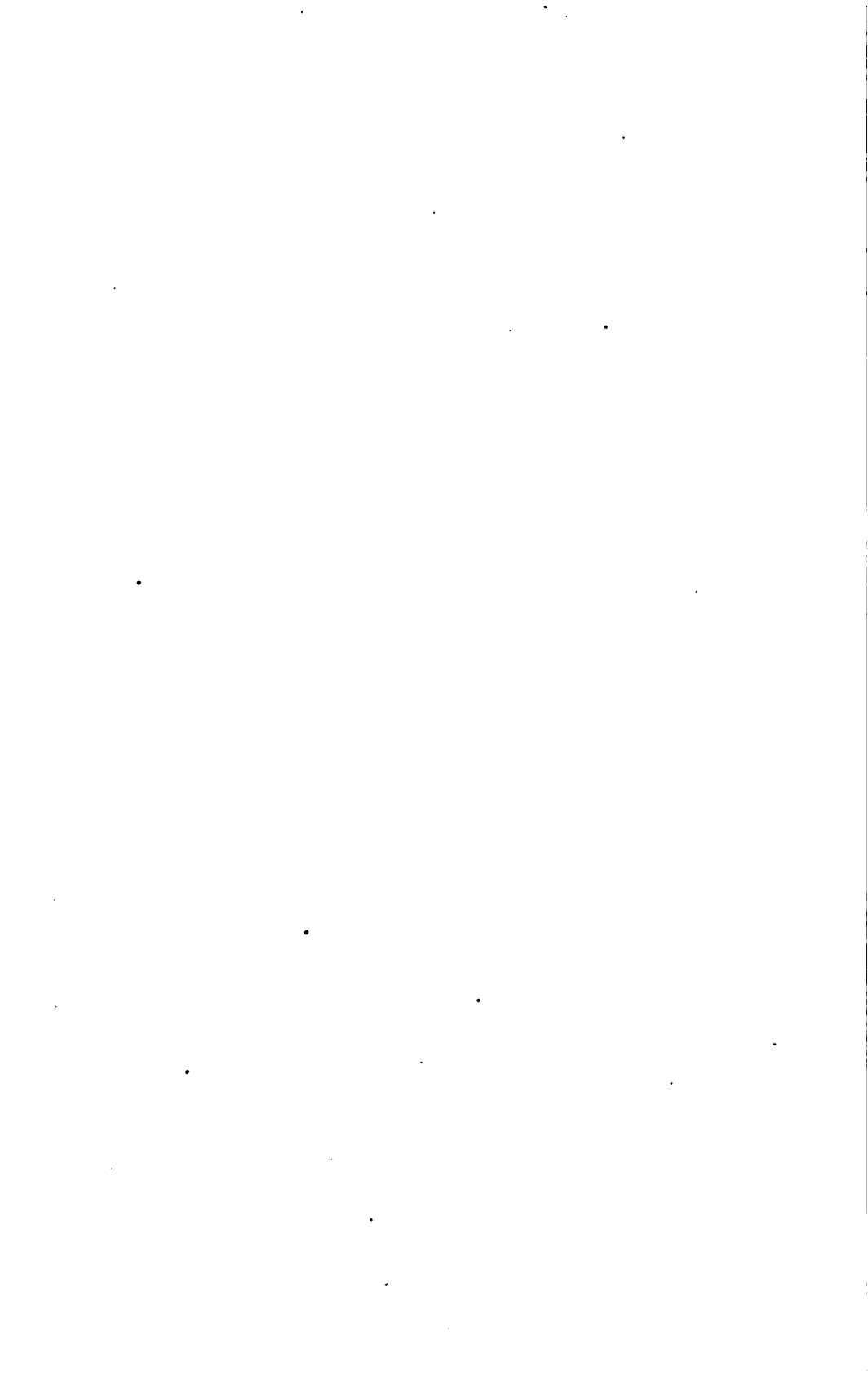
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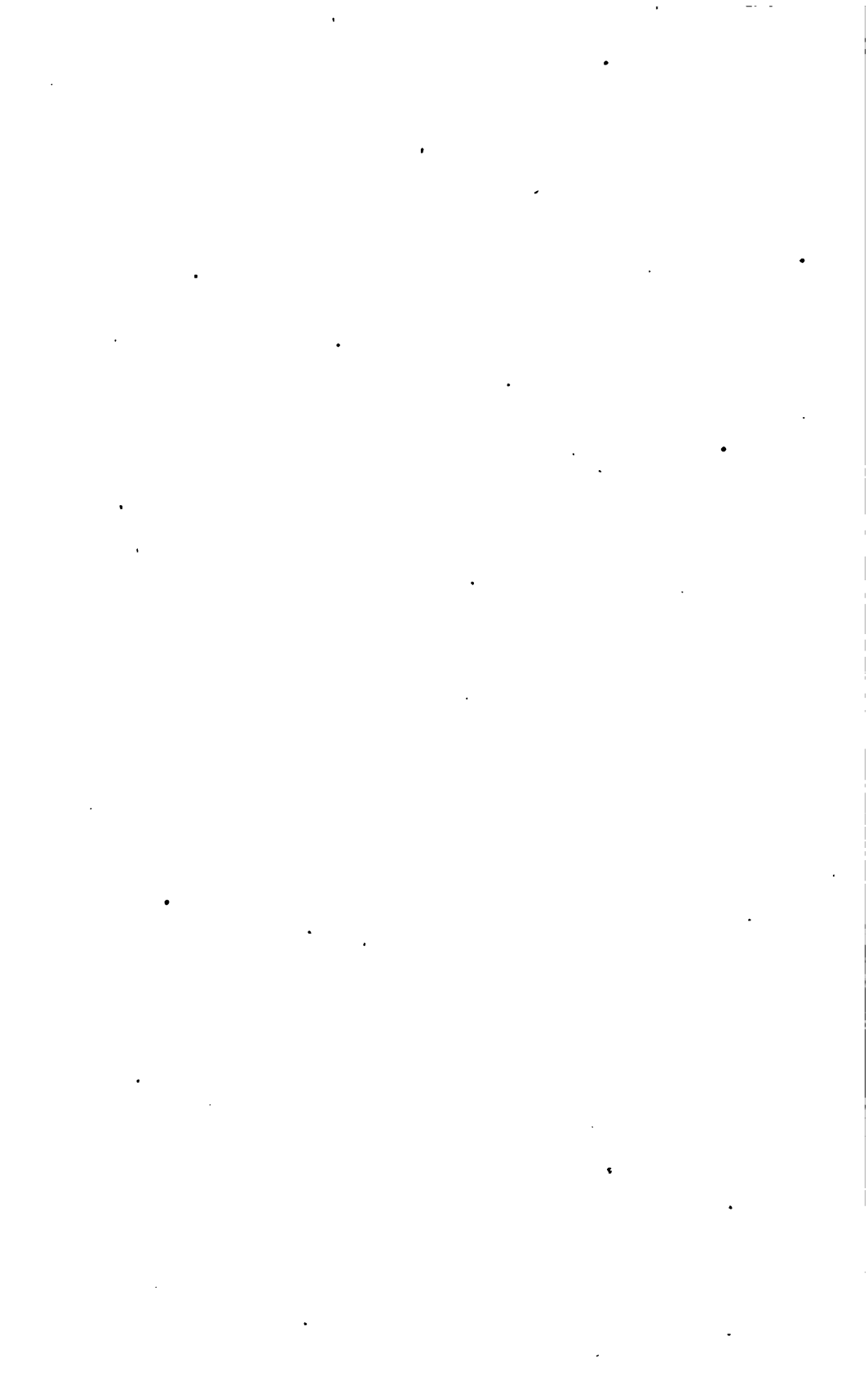
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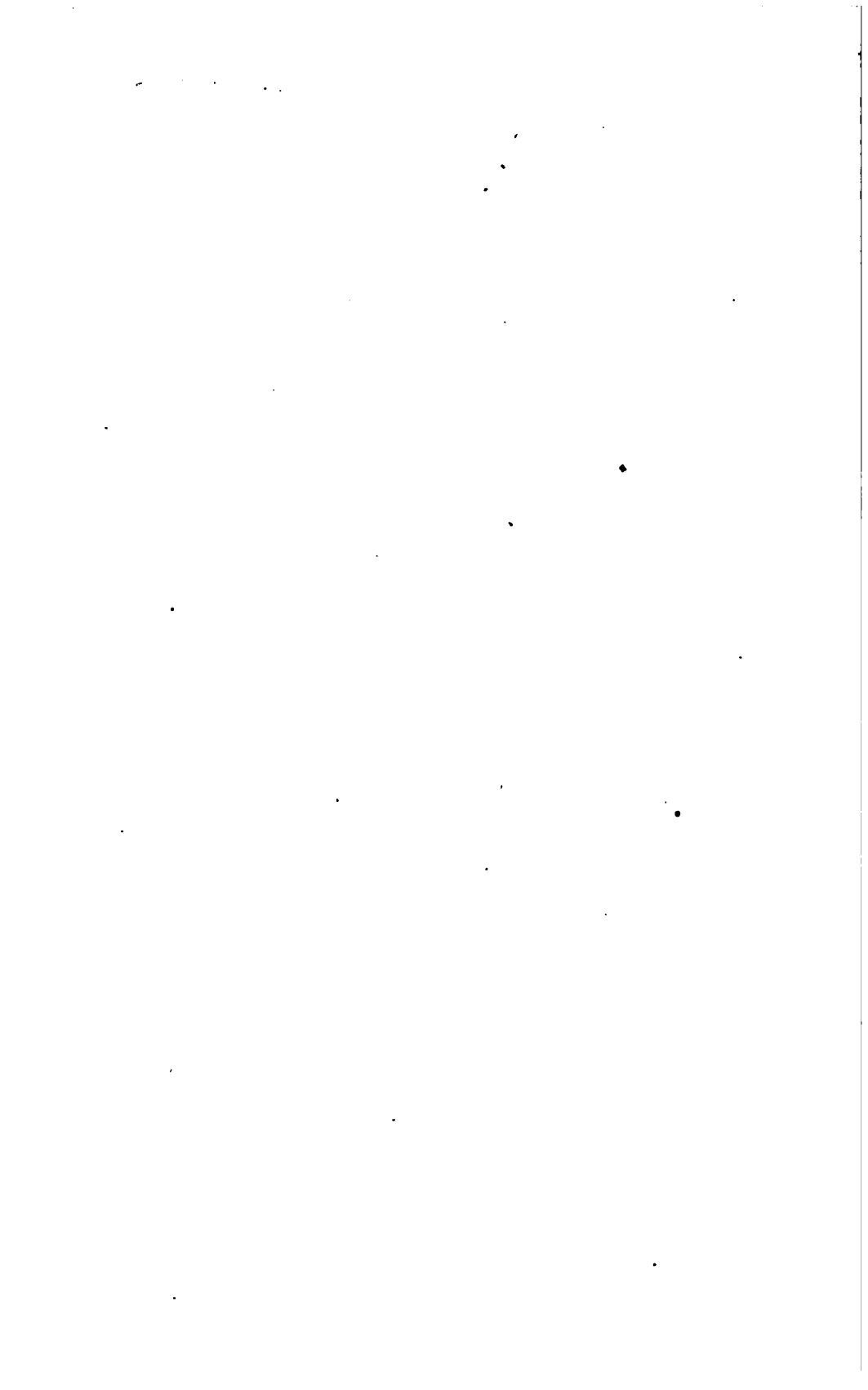












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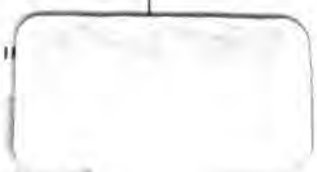
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